

NEW BYZANTINE GALLERY OPENS AT THE ROM

SUMMER 1997

ROTUNDA

the magazine of the Royal Ontario Museum

**THE
ENIGMATIC
SARGASSO
SEA**

**DRAWING
ON DESIGN**

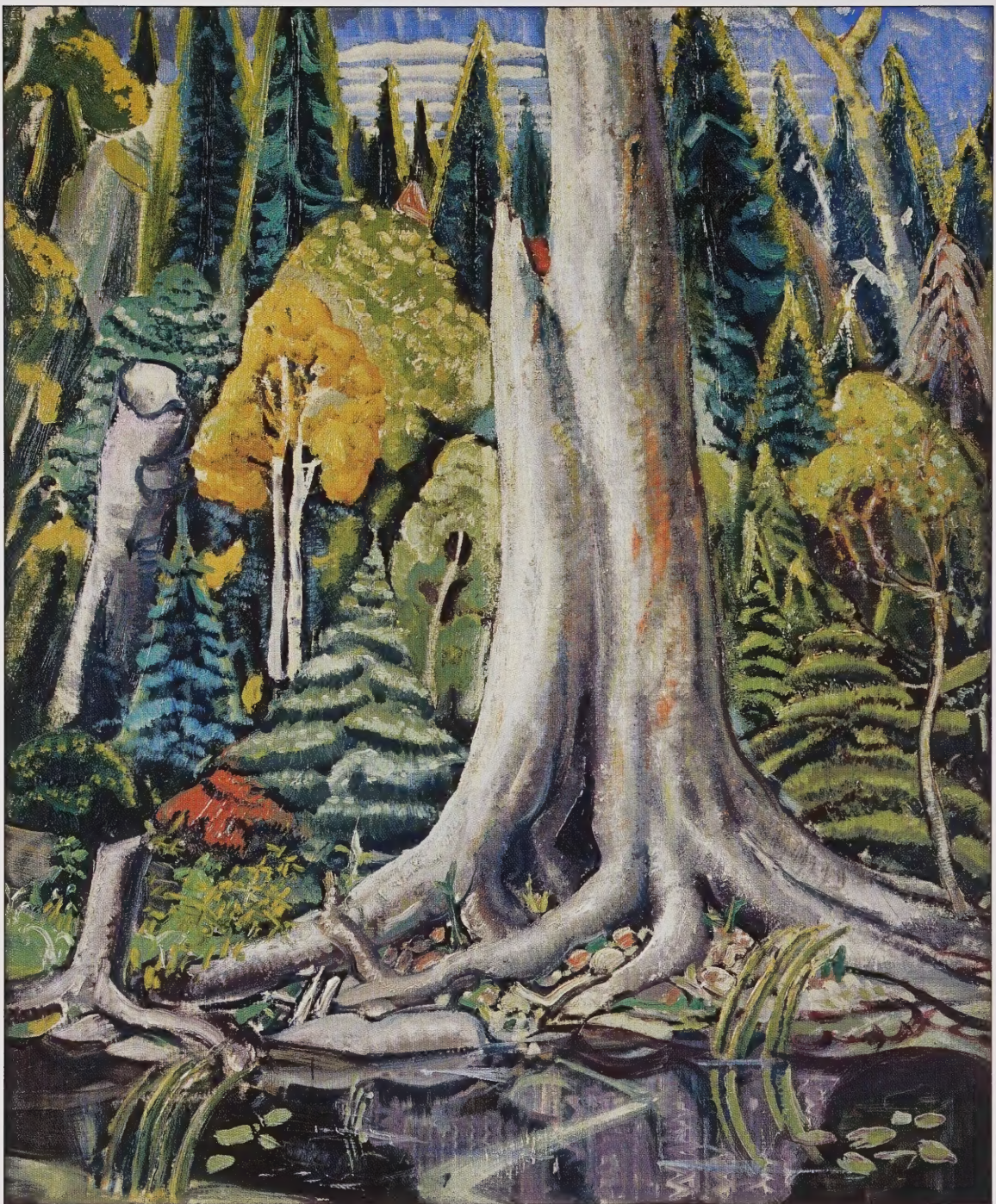
**THE MUGHAL
GARDEN:
VISIONS OF
PARADISE**

**POTATOES
FOR COMFORT**



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Arthur Lismer R.C.A

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Volume 30, Number 1, Summer 1997

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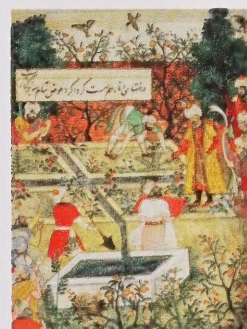
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DRAWING ON DESIGN

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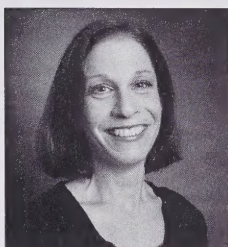
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Modern-day horror stories about the Bermuda Triangle often sound like throwbacks to old mariners' tales about sailing off the edge of the Earth. The so-called triangle is, however, located within what is a truly unique and intriguing body of water known as the Sargasso Sea. Totally bound by the Atlantic Ocean, the sea is itself a great lens of warm salty water, several hundred metres thick, floating on top of much colder and denser water. Extending south in a slipper shape from Newfoundland, it covers more than five million square kilometres of the North Atlantic. Dale Calder, a ROM biologist, studies the tiny animals that dwell in the Atlantic Ocean off the coasts of Bermuda. Many are found amongst the *Sargassum*, the dense gulfweed found only in the sea. Calder paints a picture of this mysterious body of water and the delicate ecosystem that it supports.

Through the generosity of Joey and Toby Tanenbaum, the ROM was able to collect some wonderful examples of Byzantine art and build a gallery to display them. My article previews the new Joey and Toby Tanenbaum Gallery of Byzantine Art, which will open at the end of June.

The Byzantine empire, the first Christian political entity, was founded by Emperor Constantine in 330. Its capital, Constantinople (now Istanbul), became the centre of trade between Africa, Asia, and Europe, with as culturally diverse a population as one could find in any cosmopolitan city today. Objects in the new gallery provide insight to the transition from the classical era to the formation of the Christian era. The enduring influence of the Byzantines is most vital in the Orthodox Church; however, it also finds expression in areas such as jewellery design and mosaics.



Don't miss this new gallery when you next visit the Museum.

While there is no question that European drawings in the Museum's collection are often very beautiful, they are not acquired primarily for this reason. As Howard Collinson, head of the Department of Western Art and Culture, explains in his article, the drawings provide valuable information about the history of European decorative arts. Sometimes the drawings are the principle sources of information we have on exceptionally large or rare objects, such as fancy coaches and carriages. Other times they document the ways in which objects were produced or details of their design. These drawings on design are the pictures that are worth a thousand words, and several of them are currently on display in the Samuel European Galleries.

In August India and Pakistan celebrate the fiftieth anniversary of their independence. One of the rich cultural legacies found in India is that of the Mughal Empire. The Mughals were of Persian descent. To mark their conquest of India in 1526, they built extraordinary gardens in the rigidly geometric design favoured by the Persian elite. Lisa Golombek, a ROM curator of Persian art, recounts the history of the Mughal gardens in India, the best known of which surrounds the Taj Mahal.

Make sure you "look again" at the last page. The new discovery described there is now inspiring aeronautical engineers at the University of Toronto.

From the mysteries of the Sargasso to the floral wonders of the Taj Mahal, this issue of *Rotunda* is made for summertime dreaming.

Sandra Shaul

SANDRA SHAUL

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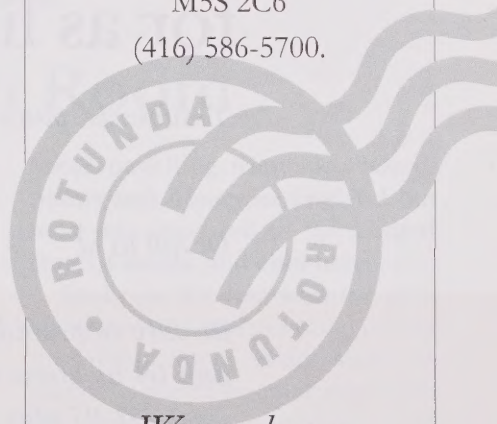
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*The Stag Hunt, c. 1725–1750, by John Wootton (1682–1764), English.
The painting was acquired with funds from the W. Garfield Weston Foundation to enhance
the Weston Room in the Samuel European Galleries.*

New Pieces for the Weston Room . . .

THE LATE W. GARFIELD WESTON and his family have long been significant supporters of the Royal Ontario Museum, from their donation of artifacts to funds for the construction of Exhibition Hall. In the 1970s, Mr. Weston presented to the European Department (now part of the Department of Western Art and Culture) English and Continental furniture dating from the 1600s through to the early 1800s. Many of these pieces are displayed in the Samuel European Galleries.

Garfield Weston gave the Reta Lila Weston Room to the Museum in 1968. Generally known to staff and guides as the Weston Room, it has a long and interesting association with Toronto. Its carved pine panelling originally came from an English parlour of about 1750–1760. Many 18th-century houses in England were demolished in the early 1900s. Specialist dealers purchased the old panelling and, as part of restoration, stripped off the paint because natural pine finish had come into vogue.

Some panelling went into boardrooms and homes in England but most was exported to the United States, Canada, and elsewhere.

Such was the case with the panelling that eventually became part of the Weston Room. Frank Wood, regarded as one of the most important art collectors in Toronto, had brought the panelling to Canada for his residence on Bayview Avenue. When the panelling was in storage during ROM renovations and expansion in the early 1980s, pencil

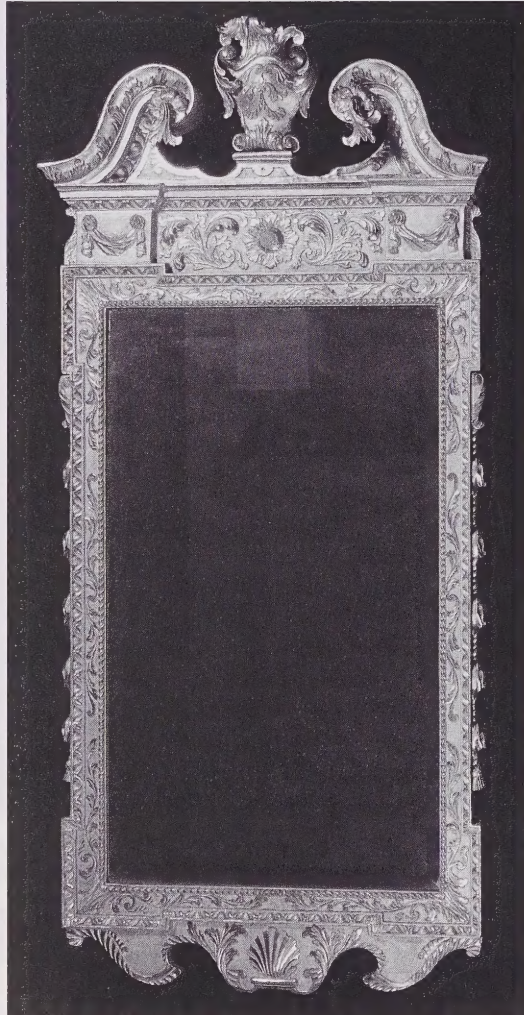
notations made by the workmen who installed it in Mr. Wood's home in April 1933 were found on the inside. The Weston family, who purchased the house from Mr. Wood, lived there for many years and furnished the room with antiques. In 1968, Garfield Weston gave the panelling and antique furniture to the Royal Ontario Museum in memory of his wife Reta Lila Weston. Today, the former Weston home is the Crescent School.

The Weston Room, which had been displayed in the former European Galleries on the Museum's first floor, was reinstalled in the first section of the new Samuel European Galleries, which opened in 1989. However, for reasons of space and visibility, only the back wall and parts of the sides of the room could be included. Nonetheless, the room plays a key role in the Culture and Context section of the galleries, where it documents the mid-Georgian style and the importance of the parlour and tea in England c. 1750–60. Typical of the period are the wide pine boards covering the floor and the plain white marble of the fireplace surround and hearth.

The Weston family continues to take an interest in the room. With the goal of making it more authentic to its period, the W. Garfield Weston Foundation donated funds in 1994 to purchase artifacts that would enhance the room as well as the ROM collection. A wish list had already been prepared by curators. Authentic English furniture from the mid-1700s that is in good condition is not easy to find. The market is extremely competitive, and prices have become very high.

Two essential pieces were a pier glass to match the carved and gilt pier table on the outside wall and a painting to hang over the mantelpiece. (A pier is the section of supporting wall between windows.) During the 1700s, looking

glasses were often hung on the piers of formal rooms to create the illusion that the outside wall was completely open. Both pieces had to be of appropriate size, and they also had to represent properly the rank of the people, probably wealthy gentry or lesser aristocracy, who would have originally owned the room.



A looking-glass, with the original bevelled-glass mirror plate in a carved pine frame with gesso and gold leaf, English, c. 1740. This exceptional piece, which has remained in its original condition, was acquired with funds from the W. Garfield Weston Foundation to enhance the Weston Room in the Samuel European Galleries.

Fortunately, two suitable pieces were found in 1996 in London, England, and they are now in the room.

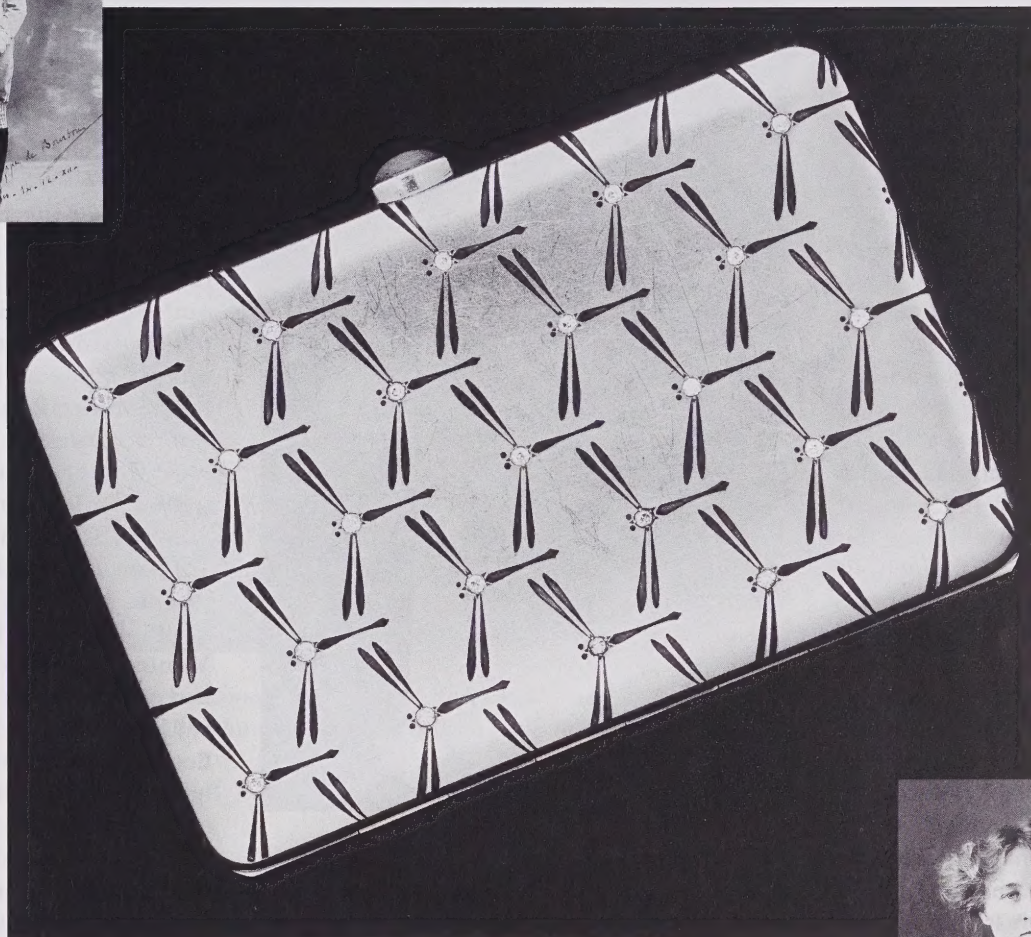
The pier glass is a fine example from the period around 1740–50. It is exceptional because it still retains

its original gold leaf and English mirror plate with hand-bevelled edge. Most surviving pier glasses have replacement mirror plates and major repairs to the gilding. On this one the true quality of the original gilding is clearly visible. The gold leaf on the carved pinewood relief areas was polished to a brilliant shine with an agate tooth. This contrasts with the unpolished matt background, which is punched with a pattern of tiny circles in the border and the top panel. A rare example of an object in its original state, the pier glass provides a valuable comparison to the pine pier table, which was given a new covering of gold leaf by the Canadian Conservation Institute, Ottawa, in 1988.

The second acquisition is a painting of a hunting scene by the English artist John Wootton (1682–1764). During the first four decades of the 18th century, John Wootton was the most important English painter of sporting pictures. He counted among his patrons King George II and Frederick, Prince of Wales. Hunting was a popular pastime in 18th-century England; however, in this painting, the dark sky, the large rock with its many crevices, and the trees which have had most of their branches lopped off by nature suggest that the small elegant human figures on horseback are subject to greater forces than themselves. According to the Canadian Heritage Inventory Network, there are no other paintings by John Wootton in public collections in Canada. This makes the painting an important addition to the body of English art in our country. The original period frame in the Louis XIV style is typical of the time.

The Weston family's continued interest in helping to ensure that the room is presented at the most authentic and highest standards is commendable, for it provides an enriching experience both visually and intellectually for Museum visitors.

... and a Cigarette Case with a Story



This exquisite 18-carat gold cigarette case, decorated with champlévé-enamel dragonflies set with diamonds, was presented by Prince Philippe de Bourbon to Doris Marguerite ("Tops") Topham in 1912.



THE EARLY 20TH CENTURY WAS A fascinating period, a time when the hierarchical society of the Victorian period and the long-established European aristocracy still played dominant roles in society. Fortunes went far because there was no income tax and skilled labour and fine products were often available at reasonable prices. All this would change with World War I. But life was blissful for Doris Marguerite Topham, nearly 20, and her parents at Cannes,

France, around Christmas in 1912.

Her father, Dr. Edwin Henry Topham (1858–1935), was a wealthy Englishman who had practised as a physician only long enough to buy his wife a ring. Then, having married Adèle Emilie Forget (1866–1959), from a banking family with interests in Liverpool and Geneva, he travelled extensively. He accompanied his brother Harold W. Topham on mountain-climbing expeditions, which were written up for

the Royal Geographical Society. He was also an avid golfer and laid out courses at Cannes and elsewhere. His daughter was educated by governesses while the family travelled from place to place. Until 1935, the Tophams spent the season at Cannes living in a spacious flat at the Villa Haute Rive, Route de Fréjus, from which there was a lovely view of the Mediterranean and the yacht basin.

Miss Topham or "Tops," as her friends called her, was a great tennis

player and participated in many tournaments. In December 1912, she met Prince Philippe de Bourbon (born 1885), a cousin of the Spanish King Alfonso XIII on the Italian side of the family. He seems to have taken a great liking to the attractive young Englishwoman. On 14 December, he presented her with a personally signed official photograph of himself wearing a military uniform. Framed and signed photographs were commonly exchanged among international society of the period. However, he went on to give her a cigarette case of exceptional quality.

The case is 18-carat gold and bears a French control mark and the mark of an unidentified French goldsmith who used the initials PF with a bird. The front is decorated with a grid of stylized dragonflies in *champlévé* enamel, each mounted with a tiny diamond. The technique involves firing the blue and green enamel into tiny compartments made in the surface of the metal. Enhancing the overall effect is a cabochon sapphire mounted on the clasp and a fine acid finish, apparently no longer produced today, which gives the gold a dull soft appearance. The box is rich and fashionable and at the same time understated. The angular rendition of the dragonflies suggests Cubism, then the latest artistic movement in Paris. One would almost think it was an example of Art Déco from the 1920s. However, this illusion quickly vanishes when you open the box and see “Cannes 27 12 XII/Philippe” engraved in imitation of an inscription that Prince Philippe must have supplied in his own hand.

According to Miss Topham's descendants, this case had been or-

dered by Alfonso XIII of Spain (1886–1941). He decided it was not to his taste, and it became available for Philippe, who presented it to his



The blissful years before World War I behind her (bottom), a serious Miss Topham served as a nurse for the Croix Rouge.



new friend. Another family story tells how a prominent member of the Spanish Royal Family met Miss Topham just as a yacht she and Philippe had crewed was docking after a race. Philippe's relative asked her for a cigarette. When she pro-

duced the case, he declared that he really didn't want one. He just wanted to find out whether she was using the case. A number of photos survive showing Miss Topham and Philippe enjoying time together.

When World War I came, Miss Topham, like many other patriotic young ladies, volunteered her services as a nurse. From 1915 to 1916, she worked for the Croix Rouge Sud-Africaine at the Hôpital Beau Rivage, No. 156 bls, Cannes, taking leave when her legs gave out from exhaustion. A photo of her in nurse's uniform shows a much more serious woman, her face lined with care. She resumed nursing in 1917. At this time she met a young Canadian soldier on leave in Cannes. In August 1920, Doris Marguerite Topham (1893–1980) married Joseph Harrison Macfarlane (1895–1969) and moved to Montreal. The Prince continued to write to her until 1935.

Ultimately her daughter inherited the cigarette case, and left three Canadian *Matinée* cigarettes inside it. Later, thanks to the generosity of her granddaughter, it was presented as a gift to the Royal Ontario Museum.

Experts who have seen the case have admired its quality. Production standards for fine jewellery and vertu could be very high among European firms in the early 1900s. Although some of these are well known—Fabergé and Cartier, for example—others, such as this still-to-be-identified maker, could create outstanding pieces that combine quality craftsmanship with innovative design.

PETER KAELLGREN

Peter Kaellgren is a curator in the Department of Western Art and Culture, Royal Ontario Museum



Traditionally dismissed as a wallflower at the gastronomic orgy, the humble potato ranks as one of history's great travellers.

The Potato

TRADITIONALLY DISMISSED AS A wallflower at the gastronomic orgy, the humble potato ranks as one of history's great travellers. It originated in Peru, at Andean altitudes that made corn impossible, materializing in a frenzy of colours from yellow to purple. With shamefully minimal fanfare, it has spent the last 500 years wandering the planet, sustaining entire populations with the energy it dispenses so easily for so little, confounding gastronomes with its astonishing versatility, and provoking in some of us an unending quest for the perfect *frite*.

The English myth is that Sir Francis Drake brought the potato from the New World in the latter part of the 16th century. As that story goes, it was presented as a delicacy to Queen Elizabeth I. Lizzy's chef threw away the potato and boiled the leaves, thereby

missing his shot at immortality.

The potato may have been cultivated in the Andes as early as 3000 BC. The Incas farmed it. The conquistador Pizarro took it from them, along with their civilization and lives, and certainly it was the Spanish who introduced it to Europe in the 1530s. From Spain, it travelled to Italy and beyond. By the start of the 19th century, it had emerged as one of the New World's greatest gifts to the Old, a staple as sustaining to the peasants of Europe as rice was to the masses of Asia.

The potato was poor man's caviar, poor man's truffles, poor man's everything: think of van Gogh's *The Potato Eaters*. The Irish transformed their green little island into a potato farm. The dependency was near-fatal. When blight created the potato famine of 1845–46, a million Irish

starved to death and more millions took off in "coffin ships" for Australia and the Americas. Scottish Presbyterians denounced the potato because it wasn't mentioned in the Bible, but nobody paid attention. The English, reeling in the wake of the French fry, came up with the chip. In the movie *A Fish Called Wanda*, Kevin Kline thrusts chips up Michael Palin's nose, sneering that the chip is England's only contribution to the global table.

The French, for once, had gotten off to a shaky start. There was nonsense about the potato causing leprosy. The Peruvian tuber was labelled an Egyptian fruit. It was slandered as "the worst of all vegetables" by a prominent 18th-century naturalist, Brillat-Savarin, who accepted the spud only "as a protection against famine." And one Legrand

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FOOD & CULTURE CONTINUED

d'Aussy, author of *History of the Private Lives of the French*, outsniffed everyone when he called the potato "flatulent and indigestible . . . rejected from refined households and returned to the people, whose coarse palates and stronger stomachs are satisfied with anything capable of appeasing hunger."

The unflagging campaign of Antoine Parmentier to popularize the potato as an antidote to famine in 1770 prompted the French to embrace the lowly tuber with Gallic gusto. Allegedly, Louis XVI was first entranced by Marie Antoinette because she wore potato blossoms in her hair. Parmentier has been credited with the invention of *pommes frites* and reputed to have served them to Benjamin Franklin, but it seems more likely they made their debut as Parisian streetfood early in the 19th century. Then they were shaped like half-moons and dubbed *pommes Pont-Neuf* after the oldest bridge in Paris. Nowadays, in the back alleys of Paris the cardboard boxes spilling from the trash bins of fashionable restaurants are an anthem to McCain's.

The French cherish their potatoes. Americans, surprisingly, are not big potato-eaters. The average American consumes 52 kilos of potatoes per year—as opposed to 80 for the French—and half of that is processed, bereft of flavour and food value, and probably frozen, the *coup de grâce* for any surviving vestiges of taste. However, the Americans did invent the potato chip, reputedly at a resort in Saratoga Springs, New York, in the latter half of the last century. When I was a boy, Toronto's leading brand was Saratoga. I can taste it still.

The potato chip is the addictive doyen of snacks on this continent, accounting for sales approaching well over \$3 billion a year. None of the "healthy" bean, rice, bran, or taro root chips have been able to bite off a crumb of its domain. It's had its ups and downs. It is smartly ridding itself of hydrogenated oils, which are as nasty as cholesterol. Ar-

tificially flavoured chips leave a peculiar fuzz on the tongue, as if you'd just eaten a fake fur. The latest twist, the lo-fat baked chip, simply proves the chip has to be fried to be worth its salt. But the popularity of kettle-cooked, sea-salted chips that actually taste of the potato is something to celebrate—a return to the spirit of Saratoga.

Only a dozen or so of the hundreds of varieties of potato actually make their way into our lives. They come oblong and round, waxy and floury, soft and firm, their flesh anywhere from pure white to deep gold. Their versatility is incomparable. They turn up in soups, in salads, in omelettes (it is potato that makes a Spanish omelette Spanish), in Indian pakoras and dosas, on breads, in sauces, baked or roasted, steamed or grilled, scalloped or hash-browned, creamed and dumplined, puffed and crisped, croquetted, and courted by anyone in search of easy comfort.

If the spud doesn't qualify as erotica, it musters enduring affection. Truman Capote wrote lovingly of plucking new potatoes from his garden, boiling them, and spreading them with sour cream and caviar. Toronto chef Jean Pierre Challet's feeling for the potato approaches *l'amour*. He smokes potatoes and pairs them with foie gras, sauces potato pancakes with caviar, weaves edible potato baskets, turns out an impeccable *frite* and has gone a step further: Can you believe potato sherbet?

The following recipes by Carol Clemens are potato comfort food.

POTATOES PERIGORDINE

Taking its cue from the land of foie gras and truffles in the French Southwest, this delirium-inducing fried-potato dish gives the frite a run for its money. Duck or goose fat is authentic, but a mixture of olive oil and butter can be substituted.

Ingredients

- 750 g (approx. 1-1/2 lbs) potatoes, peeled and washed
- 60 ml (1/4 cup) melted duck or goose fat (or half-and-half butter)

- and olive oil)
- 4 cloves garlic, thinly sliced
- 30 ml (2 tbsp) chopped parsley
- 60 ml (4 tbsp) water
- salt and pepper to taste

Preparation

Slice the potatoes into 3 mm (1/8-inch)-thick slices. Pour half the duck fat or olive oil into a 26 cm (10-inch) non-stick skillet. Layer the potato slices in concentric circles in the skillet. Sprinkle with garlic, parsley, water, salt, and pepper.

Cover and cook 15 minutes over medium-low heat. Remove the cover, increase heat to medium-high, and brown the potatoes (about 5 minutes).

Place a plate over the skillet. Invert the potatoes onto the plate. Carefully slide the potatoes back into the pan so that the browned side is up. Sprinkle with salt and pepper. Brown the second side. Cut into wedges and serve. Serves 4, if restraint is maintained. Serves 2, if it is not. Serves 1, if you're me.

PERFECT FRITES

Ingredients

- 6 large russet potatoes, peeled
- oil for deep frying
- salt

Preparation

Slice potatoes lengthwise into 6 mm (1/4-inch) strips. Chill strips in ice water for 1 to 2 hours. Drain strips well and dry on tea towel. Heat oil in a large pot to a depth of 10 cm (4 inches). When oil reaches 190°C (375°F) blanch potato strips in batches (do not overcrowd) for 4 to 6 minutes. Remove from oil and drain. Potatoes may be prepared to this point up to 1 day ahead. Keep refrigerated.

Just before serving reheat oil to 200°C (400°F). Fry potato strips for the second time until they are golden brown (3 to 5 minutes). Drain on absorbent paper; salt and serve at once.

JEREMY FERGUSON

Jeremy Ferguson writes about food and travel

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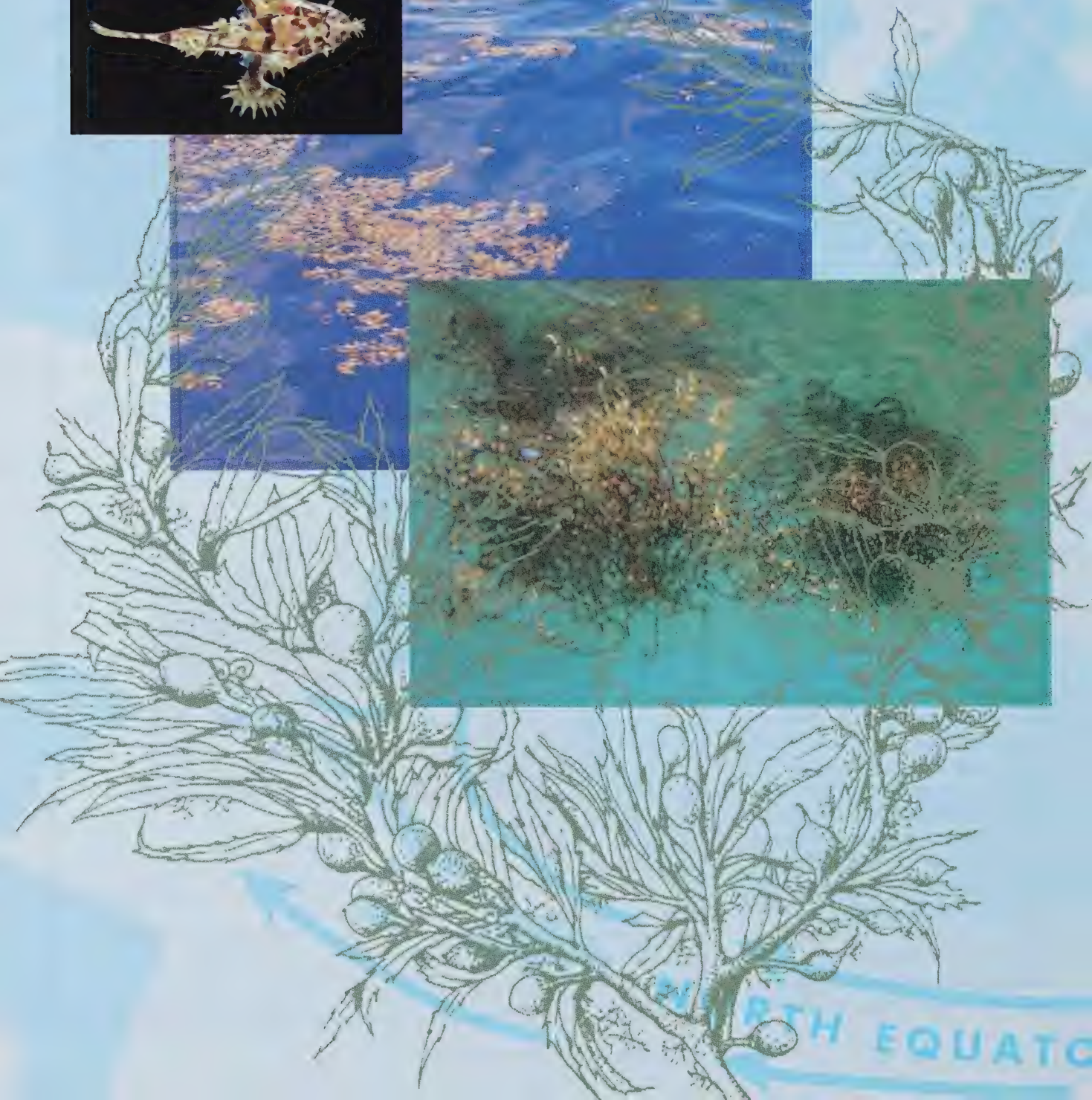
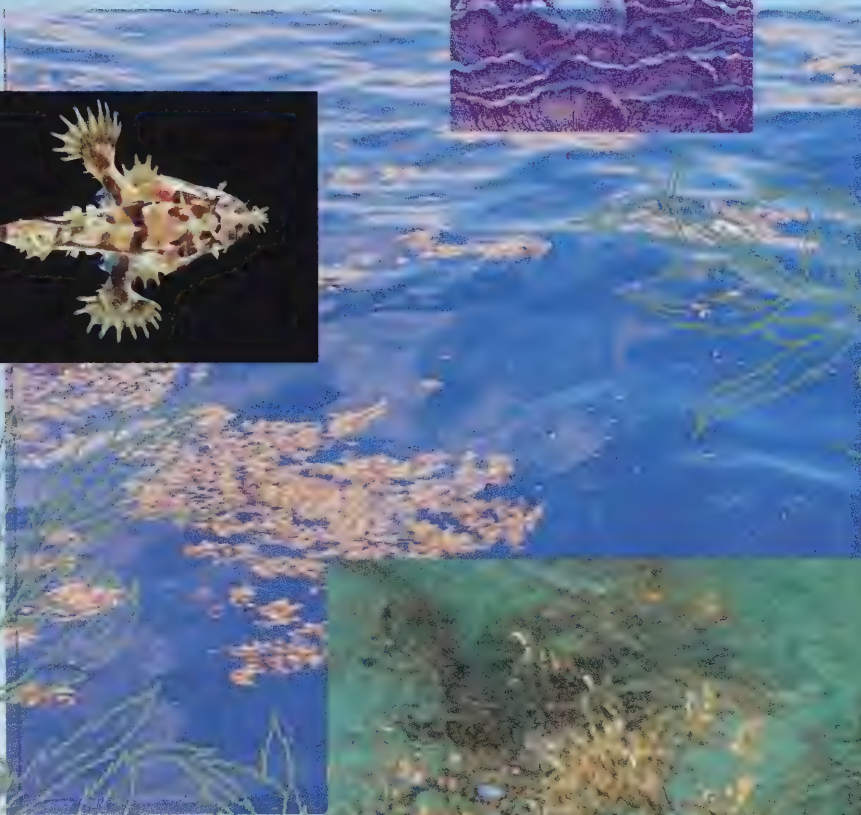
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The mysterious floating gulfweed or *Sargassum* of the Sargasso Sea once terrified mariners. Rather than the sea monsters imagined to lurk around the weeds, scientists have found fascinating animals such as the fish called *Histrio histrio*.



4TH EQUATOR

THE ENIGMA OF THE ATLANTIC

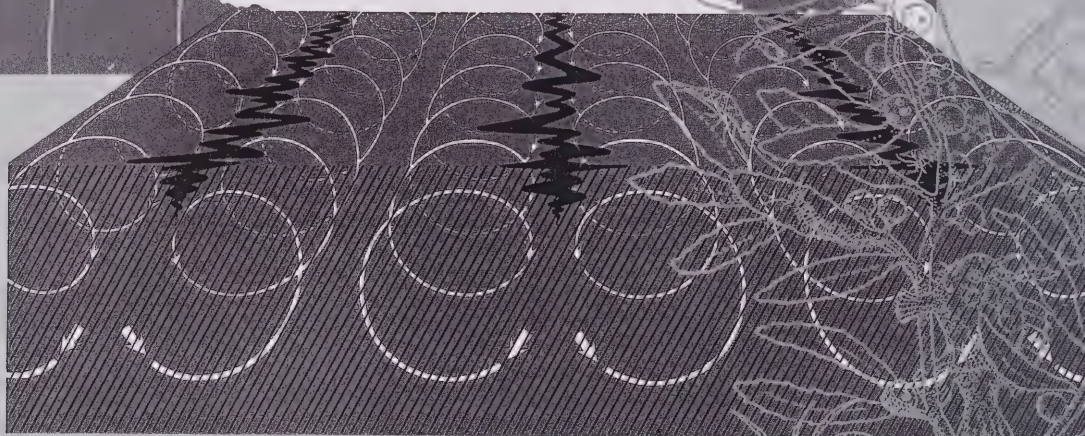
The Sargasso Sea, with its so-called Bermuda Triangle, has terrified mariners and intrigued scientists for centuries

DALE R. CALDER

More than five centuries have come and gone since Columbus sailed westward into the Atlantic Ocean in search of a new route to Asia. Once past the Azores in 1492, he and his crew entered a peculiar place where strange seaweeds were seen floating at the surface of the sea. As *Niña*, *Pinta*, and flagship *Santa María* made headway further into the unexplored central Atlantic, clumps of these drifting algae became more prevalent. For several days during the voyage, the three small sailing ships were becalmed amidst the mysterious weeds. Some of the sailors became fearful

*Dale Calder is a curator in the Centre for Biodiversity and Conservation Biology,
Royal Ontario Museum*

Sunset on the Sargasso Sea, as seen from the American research vessel *Edwin Link*. The Sargasso Sea is a body of water within the Atlantic Ocean. Once distinguished by its remarkable seaweed, the sea is now defined by the characteristics of its waters. The drawing shows hydroids and other animals that live on the *Sargassum*.



that they were in imminent danger from unseen shoals, where they supposed this abundance of seaweed must grow. In fact, they were in waters several kilometres deep beneath their keels and weeks would pass before landfall was to be made in the West Indies.

Columbus's ships were crossing an immense sea within the North Atlantic Ocean. An unusual body of water, it has no shore, other than that part fringing the tiny oceanic island of Bermuda, and it is bounded on all sides by surface water currents. Its boundaries to the west and north are formed by the warm and powerful Gulf Stream, surging northward to Cape Hatteras like a mighty river before veering northeastward toward Europe as the North Atlantic Drift. To the east, its limits approach the Canaries Current, whose waters slowly and irregularly and sometimes imperceptibly meander southward from the Iberian Peninsula to North Africa. Completing the loop to the south is the North Equatorial Current, drifting westward from North Africa to the West Indies. This water-bound sea is even bordered beneath by water rather than by rock and sediment. It actually constitutes a great lens of warm salty water, several hundred metres thick, floating on top of much colder and denser water at greater depths. Powered by the Earth's rotation, this lens of water also rotates like a horizontal wheel in an imposing gyre, spinning slowly in a clockwise direction.

Today this body of water within the North Atlantic is known as the Sargasso Sea. Its surface covers roughly 5,179,980 square kilometres (two million square miles) in area, although its size and borders are far from static. The northern periphery of the Sargasso is indented by cold waters moving southward off Newfoundland, making its outline more slipper-shaped than oval.

Though defined by modern oceanographers largely on hydrographic characteristics, including its water temperature, the fabled and enigmatic Sargasso Sea was first recognized and distinguished by the general distribution of those remarkable seaweeds seen by Columbus. It also shares the derivation of its name with those algae, which have been assigned the Latin generic name *Sargassum*. Two species (*Sargassum natans* and *Sargassum fluitans*), both having the common name "gulfweed," constitute more than 95 per cent of the floating algae in this sea. Tiny air bladders provide buoyancy, keeping them afloat at or very near the surface.

Where does all the algae in the Sargasso Sea come from? Columbus had speculated that it must break loose from shallow banks southwest of the Azores, but no near-surface banks where algae could grow exist in the area. By last century, gulfweeds were widely assumed to originate from hard bottoms somewhere in the Antilles. However, weed beds would have to be vast there to account for the masses of pelagic *Sargassum*, and no such beds have ever been found. Evidence is now overwhelming that the two species of *Sargassum* are native to the Sargasso Sea itself, and that they have existed here for many thousands of years. Neither of the two has ever been found attached anywhere, yet they have been able to maintain their abundance in the region. Seaweeds lost must be replaced by re-

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PHOTOGRAPHY (PREVIOUS PAGES) BY DALE CALDER; ENGRAVING OF A GIANT SQUID FROM *HISTOIRE NATURELLE* BY BUFFON; PHOTOGRAPH BY KRIS JENSEN AND WOLFGANG STERRER; DRAWING BY MARY MARK, ROYAL ONTARIO MUSEUM PHOTOGRAPH (FACING PAGE) BY DALE CALDER; ILLUSTRATION BY J. W. HEDGPETH; MAP BY PETER ENNESON; DRAWING COURTESY SCIENTIFIC AMERICAN

The inset shows
gulfweed floating
at the surface of
the sea. A piece
of *Sargassum*
fluitans, one of
the two species
of gulfweed,
is covered by
fernlike hydroids
(*Aglaophenia*
latecarinata). A
small crab sits
on the right side
near the bottom
of the plant.



cruitment from within the existing crop. Reproduction occurs exclusively by asexual fragmentation and growth, and their entire life is spent adrift at the surface of the open ocean. It is a novel lifestyle . . . neither substrates nor sex is necessary.

Largely because of its conspicuous and mysterious seaweeds, the Sargasso Sea has been the focus of a number of legends. Many early mariners sought to avoid the region, fearing that their ships would forever be entangled in the impassable masses of algae thought to occur there. And surely, amidst all that bizarre vegetation, there must lurk sea monsters of one sort or another. Scientists and mariners alike now know that the amount of drifting seaweed has been greatly exaggerated. One reliable estimate indicates that, at any given time, there may be about seven million tonnes of these algae adrift in the Sargasso Sea. Spread over such a vast area of water, however, it is patchy in distribution and never present in sufficient quantities to pose a hazard to navigation. And no sea monsters of horror movie proportions have ever been discovered.

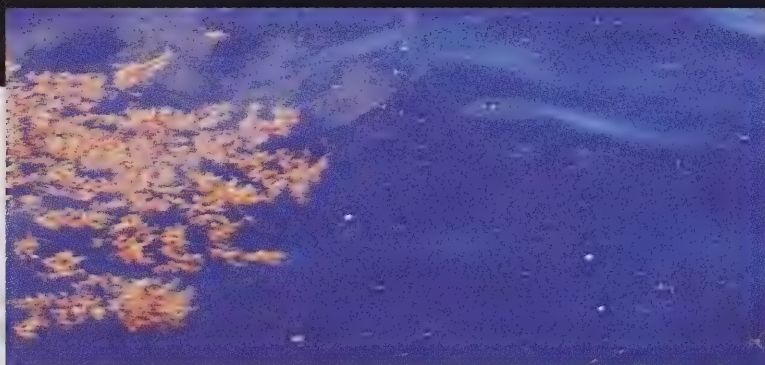
Discredited tales of impassable algal jungles and sea monsters have been replaced more recently by super-market tabloid headlines and sensationalistic television programs trumpeting the notorious Bermuda Triangle. Having repeatedly flown over the region, sailed across it aboard research vessels, swum in it, and dived to a depth of more than 3.5 kilometres into it in a research submarine, I've never experienced any particularly hair-raising events that could be attributed to the twilight zone. This article is being written while at sea, within the so-called Bermuda Triangle, on the German oceanographic ship *Meteor* steaming up from Puerto Rico to Bermuda. Along the way German, American, Israeli, and Canadian scientists have tempted fate by puncturing the sea floor several kilometres below with cores for sediments, by dropping nets overboard for plankton, by dredging for bottom-dwelling invertebrate animals, by taking seawater samples, and by collecting *Sargassum*. There have been no spinning compasses, no electrical blackouts aboard ship, no unexplained human disappearances, and no opening up of holes in the ocean. Far more interesting than fanciful tales about inexplicable mysteries of "the triangle" are the natural mysteries of the sea itself, of the paradoxical marine organisms that exist here, and of the records its sediments can reveal, scroll-like to geologists, about global climate changes.

One might reasonably conclude, given the amount of indigenous *Sargassum*, that the Sargasso Sea is very productive biologically. Certainly it is a warm, watery expanse exposed to extensive solar energy; yet it is, on the contrary, a great ocean desert. Waters of the Sargasso are extremely low in nutrients and among the least productive on Earth. No rivers carrying nitrates and phosphates flow into it, and there is no upwelling of nutrients from the sea floor far below. As a result, it is poor in plankton, the base of the oceanic food chain. Because of its infertility and low concentrations of plankton, the water is exceptionally clear and an unforgettable royal to cobalt blue in colour. Daylight penetrates from the surface to 200 metres or more, as witnessed during ROM

Far more interesting than fanciful tales about inexplicable mysteries of "the Bermuda Triangle" are the natural mysteries of the sea itself, of the paradoxical marine organisms that exist here, and of the records its sediments can reveal to geologists about global climate changes

PHOTOGRAPHY BY KRIS JENSEN AND WOLFGANG STERRER; INSET BY DALE CALDER

A tiny *Sargassum* swimming crab is one of the organisms found in the Sargasso Sea. A detail of *Sargassum* nudibranch (*Scyllaea pelagica*) is shown above and a closeup of algae on the water's surface is seen below.



dives aboard the research submarine *Alvin* in the northwest Sargasso Sea off Bermuda during 1993 (see *Rotunda*, volume 26, number 2, fall 1993).

Just as there are watery oases in the sandy desert, so too there are floating oases in the watery expanse of the Sargasso. Drifting rafts of *Sargassum* constitute miniature islands and a permanent home on the high seas for a myriad of species usually associated with shallow coastal bottoms. Marine biologist Joel Hedgpeth aptly called these permanent *Sargassum* associates "displaced benthos," the word "benthos" referring to bottom dwellers. Hydroids, barnacles, tubeworms, moss animals, and small algae grow in profusion on the weeds. Tiny shrimp, crabs, snails, sea slugs, motile worms, and sea spiders swim around or crawl over them. The curious *Sargassum* fish clings to the algae and mimics their foliose appearance and golden-brown colour. Many of the invertebrates, too, are camouflaged by shape and colour to blend in with their background. Moreover, associates of *Sargassum* are typically stunted in size compared with their nearshore kin. *Sargassum* provides a temporary refuge for a number of other oceanic species, and it even serves as a nursery. Various species of flying fish, common across the Sargasso, attach their eggs in tough strands to these algae. Recently, a quite different role of gulf-weed in the ecology of the sea has been discovered. Sunken *Sargassum* eventually settles to the sea floor, providing an important energy source for certain creatures in the cold, dark, and food-poor abyss.

How robust is the environmental health of this enchanting sea? Unlike many other parts of the Earth it perhaps looks much the same today as it would have looked a millennium or more ago. It is far from land and human habitation, and from the deck of a solitary ship hundreds of kilometres offshore is seemingly immense. How could our species possibly have any real impact out here? Yet it is clearly apparent that we do. Floating plastics, debris, and tar balls are, sadly, altogether too frequent. Tow a net through the water or simply explore a beautiful beach in Bermuda after a storm has passed, and the flotsam and jetsam of 20th-century culture is obvious.

Several years ago questions arose in scientific papers about whether a decline in the abundance of *Sargassum* was taking place. The evidence was subsequently dismissed as inconclusive. Lately, though, new concerns have arisen about the possible vulnerability of these surface-dwelling algae to increasing ultraviolet radiation resulting from depletion of ozone levels in the atmosphere. On my two-week passage from Puerto Rico to Bermuda in May and June 1996 aboard *Meteor*, only a few isolated clumps of *Sargassum* were seen. A reward of a bottle of whisky to the first person sighting an algal mass 10 metres or more in diameter went unclaimed. Perhaps the seaweeds were concentrated in another part of the Sargasso Sea. For now, the Sargasso, its inhabitants, and its Alice-in-Wonderland ecology are just too poorly known for us to understand whether there has been significant and permanent degradation. Unique and intriguing, let's hope this unusual sea can survive as a relatively unspoiled part of our watery planet. ♦

For now, the Sargasso, its inhabitants, and its ecology are just too poorly known for us to understand whether there has been significant and permanent degradation. Let's hope this unusual sea can survive as a relatively unspoiled part of our watery planet

PHOTOGRAPHY BY KRIS JENSEN AND WOLFGANG STERRER; INSET BY DALE CALDER



VISIONS OF PARADISE IN

Mughal gardens present a view of the world as

ONCE YOU REALIZE THAT THE TAJ MAHAL occupies but a small corner of 17 hectares (42 acres) of gardens, it is the gardens that totally captivate you. Their insistent formality and their rigid geometry, defined by a system of intersecting canals and walkways, strike a familiar cord. They recall Renaissance gardens, such as the Villa d'Este at Tivoli (1573) with its terraces and central axis flanked by formal quartered grounds, or the later gardens of Versailles.

Are the similarities fortuitous or is there an historic explanation for them? This is a controversial question. Linger in the background of the Taj Mahal's Mughal garden is the



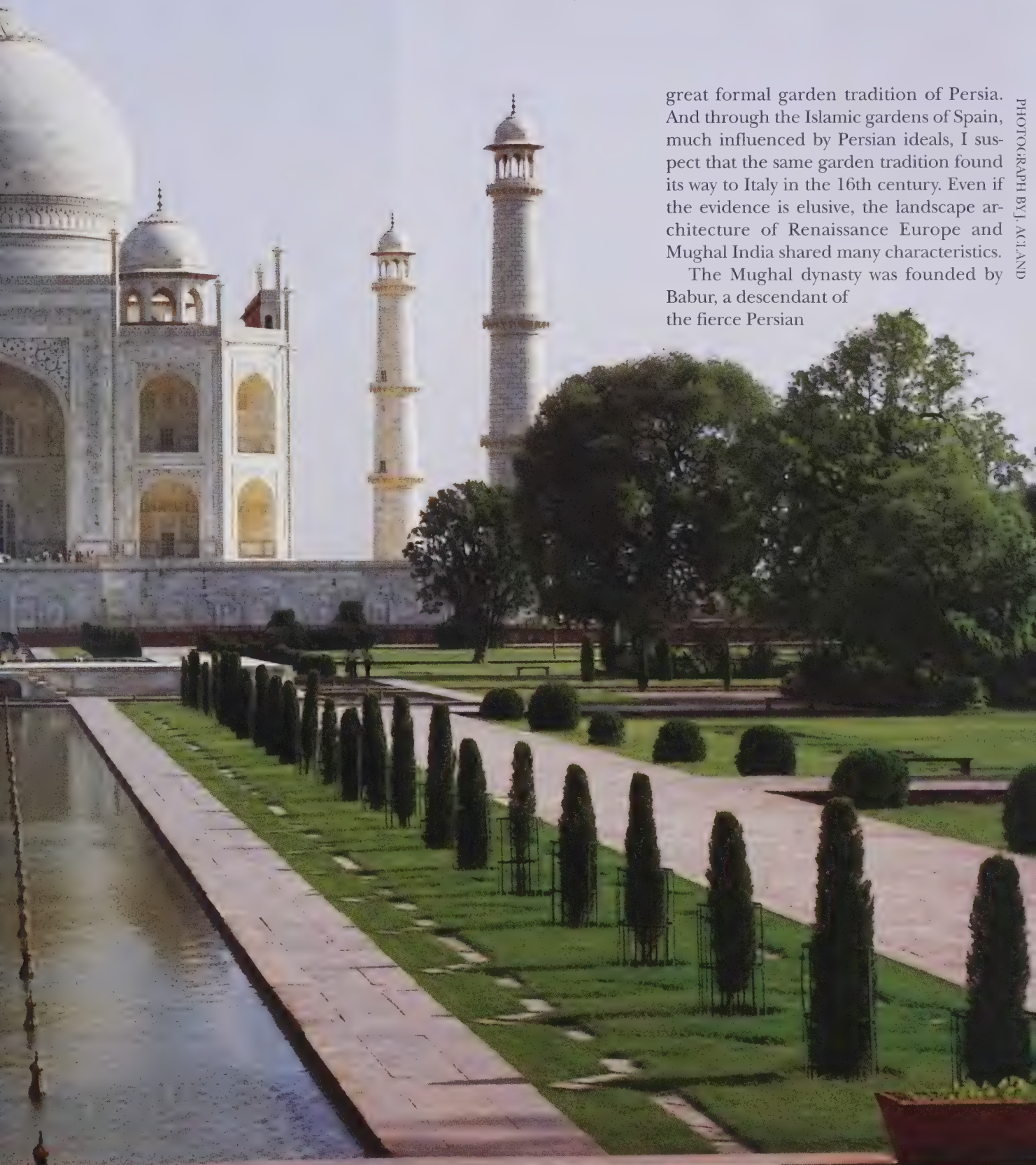
THE MUGHAL GARDEN

landscape ordered by divine geometry LISA GOLOMBEK

great formal garden tradition of Persia. And through the Islamic gardens of Spain, much influenced by Persian ideals, I suspect that the same garden tradition found its way to Italy in the 16th century. Even if the evidence is elusive, the landscape architecture of Renaissance Europe and Mughal India shared many characteristics.

The Mughal dynasty was founded by Babur, a descendant of the fierce Persian

PHOTOGRAPH BY J. ACILAND





The Taj Mahal (preceding pages) occupies a small corner of 17 hectares of formal tomb gardens. The quilt, c. 1900, pictured above, in the collection of the Royal Ontario Museum, and the Mughal painting of exotic flowers and insects, c. 1635, pictured on the facing page, from the Dara Shikoh album in The British Library, show the influence of naturalistic European art. In contrast, the actual gardens, as seen in the reconstructed plan of a Timurid *chahar-bagh* (a four-fold garden), above, and the plan for the Taj Mahal (a tomb garden), facing page, were rigidly geometric. In this illustration from a manuscript of the Babur-nama, c. 1598, Babur is pictured laying out the gardens of Kabul. His architect is seen referring to the plans. Collection of the Victoria and Albert Museum.

RECONSTRUCTION BY MARIA E. SUBTELNY AND WIKTOR MOSKALIUK; DRAWING BY WIKTOR MOSKALIUK; PHOTOGRAPH BY BRIAN BOYLE

warlord Timur, or Tamerlane, whose family ruled a large portion of Iran and Central Asia from 1370 to around 1500. Babur failed to hold the capital Samarkand, and the last remains of the Timurid empire fell to the Uzbeks.

However, Babur's deep desire for a land to rule drove him from his Central Asian homeland south across the Pamirs into Afghanistan. He captured Kabul, the capital, and resided there until he abandoned his dream of recapturing Samarkand, instead leading a successful campaign into India.

While biding his time in Kabul, Babur took advantage of the mountainous terrain to build numerous gardens for he did not believe in leaving nature to its own devices. Babur's cultural background was Persian, and in the Iranian world gardens were at the centre of aristocratic life. Major events, such as coronations, weddings, and circumcisions, took place in the royal gardens.

In the semi-arid lands of Iran the garden was possible only through the manipulation of nature. Gardens were formally designed by specialists trained in engineering, hydraulics, building, and horticulture. Elaborate irrigation systems had to be devised for cultivating orchards and flower plots. However, in Kabul the mountain streams and rainfall provided ample vegetation. Yet Babur felt compelled to order the landscape. A story from his autobiography illustrates this point. Once, while travelling outside Kabul, Babur came to a spectacular vantage point that had a small garden. He described "a pleasant halting place, under great plane-trees, green, shady, and beautiful. A mill stream, having trees on both banks, flows constantly through the middle of the garden; formerly its course was zigzag and irregular; I had it made straight and orderly; so the place became very beautiful."

To Babur beauty lay in symmetry and order. On his first visit to Delhi, the capital of his newly acquired empire, he complained: "Hindustan is a country of few charms . . . in handicraft and work there is no symmetry, method or quality; there are no good horses, no good dogs, no grapes, no musk-melons or first-rate fruits, no ice or cold water, no good bread or cooked food in the bazaars, no hot-baths, no colleges, no candles, torches or candlesticks.



Except their large rivers and their standing-waters which flow in ravines or hollows [there are no waters]. These residences have no charm, air, regularity or symmetry."

After his conquest of India, Babur's nobles built their gardens along the river in Agra, the new capital. According to Babur, people were amazed. "The people of Hind,

Lisa Golombek is a curator in the Department of Near Eastern and Asian Civilizations



PHOTOGRAPH COURTESY THE VICTORIA AND ALBERT MUSEUM

who had never seen grounds planned so symmetrically and thus laid out, called the side of the river where our residences were, Kabul.”

In fact, India already had many gardens containing all of the components that Mughal gardens were to have, such as canals, pools, pavilions, and walls, but they

were informally organized. Babur’s love of running water, familiar from his mountainous habitats, led to an emphasis on water flowing through canals, cascading down chutes of terraced (hanging) gardens, and spurting from fountains. The hydraulic engineering necessary to create such fantasies also existed in India, but the inspiration and desire for their production came from the Timurid world (which, in turn, had picked up this expertise from Syrian émigrés to the court of Timur).

Mughal gardens were a fusion of the ancient Persian notion of the royal Paradise (essentially, a watered but unmanicured hunting ground) and the Islamic notion of Paradise as exemplified by the Garden of Eden, through which flowed the four great rivers named in the Qur’an. By the 15th century such a garden comprised a large walled area divided into four quarters defined by cross-axial canals. This type of garden was called *chahar-bagh* (four-fold garden).

Babur’s intense interest in garden design is reflected in the late 16th-century illustrations accompanying his autobiography, which he compiled for his grandson Akbar. Babur is shown supervising the construction of the Bagh-i Wafa in Kabul. In a very realistic rendition, the master landscape architect is reading the plan, set out on a grid of squares, while the gardeners work within the sunken plots between the raised, hollow walkways that conduct water into and across the garden from a reservoir outside. Water is drawn into the reservoir from a river via an aqueduct or through a complicated system of waterwheels, powered by animals.

Only a royal treasury could finance such an operation and, as such, gardens were considered symbols of power. Founding a garden was a way of establishing territorial rights. The first thing Babur did when he defeated the Lodi sultan at Panipat in 1526 and established the Mughal dynasty of India, was to build a mosque *and* a garden. He then ordered his nobles to build orchards and gardens in every city. For Babur the designing of gardens was more than a simple hobby. He was literally cultivating his kingship and in this regard he was not unlike a European monarch.

After Babur, the Mughals continued to



While biding his time in Kabul, Babur took advantage of the mountainous terrain to build numerous gardens for he did not believe in leaving nature to its own devices

PHOTOGRAPH COURTESY THE BRITISH LIBRARY; DRAWING COURTESY LISA COLOMBEK

The exhibition *Arts of South Asia* will be on display at the Royal Ontario Museum from 9 August 1997 until 22 March 1998

favour the Persian model of the garden. Three types of formal gardens developed in the Mughal empire, sponsored not only by the Muslim rulers, but also by the vast number of local princes and administrators on whose cooperation the rulers depended. These included Hindu as well as Muslim officials.

Although no Mughal gardens survive with the original selection of flora, the best-preserved examples of the Mughal layout date from the period of Shah Jahan (1628–57). His famous Shalamar Gardens near Lahore are an outstanding display of terraced gardens. The gently sloping land was transformed into three terraces, each rising 15 feet above the other. The upper and lower terraces are four-fold gardens and the middle terrace has a huge reservoir with a surface measuring more than 18.6 square metres (200 square feet). On the upper terrace water flows along the central canal through a pavilion and then cascades over a marble water chute into the reservoir.

As the water ripples over a carved scale-pattern, it eddies like a stream passing through rapids. Shah Jahan was charmed by the sounds of the artificial waterfall as he sat on the throne platform overhanging the reservoir. From this site, shaded by temporary colourful awnings, he could also observe performances on the large platform set in the middle of the reservoir. This platform is reached by marble causeways stretching over the water where the jets of hundreds of fountains animate the still lake. A privileged guest could sit on a stone bench in one of the lotus-shaped alcoves along the sides of the reservoir.

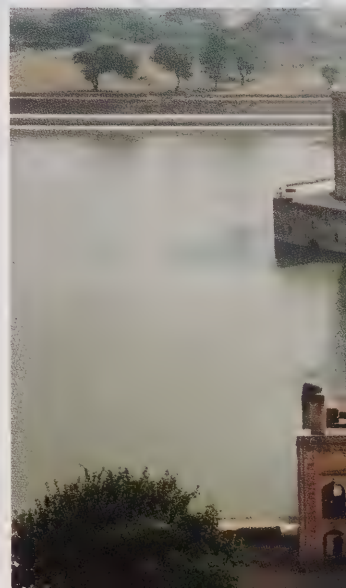
A visitor approaching the gardens from the lower terrace was greeted by a different spectacle. Passing the great cruciform pool in the centre of the terrace, the visitor would hear the sound of a rush of water splashing on the surface of a shallow pool. The middle terrace empties its waters into a “rain room,” intended to simulate the Monsoon rains. It is a three-sided chamber, the walls of which are perforated by tiny arched niches, holding flowers by day and candles by night. Lovely shade pavilions flank the room on the edge of the middle terrace,



In this mid-19th century painting of the Red Fort at Delhi, built by Shah Jahan, many formal gardens can be seen within the walled enclosure. Collection of the Royal Ontario Museum. Water plays an extremely important role in the pleasure garden. Pictured below is Sheikhupura, the hunting lodge (1606) of Jahangir, near Lahore, and the water pavilion in its reservoir added by Shah Jahan in 1634.

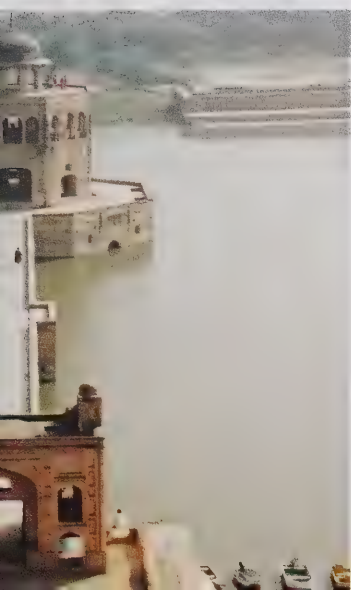
and other pavilions lie at the cross-axes of the reservoir. While the middle terrace is not, properly speaking a four-fold garden, its architecture mimics the garden plan.

Water plays an extremely important role in the pleasure garden, the second type of formal garden developed during the Mughal empire. Jahangir (1605–27), the fourth Mughal emperor, built an enormous reservoir at Sheikhupura, his hunting lodge 29 km north of Lahore, where he erected in 1606 a tower to commemorate his favourite antelope. In 1634 Shah Jahan added an octagonal three-storeyed pavilion in the middle of the reservoir that





After Babur, the Mughals continued to favour the Persian mode of the garden. Three types of formal gardens developed in the Mughal empire



PHOTOGRAPH BY LISA COLOMBEK

could be reached from the tower over a bridge on arches. Ramps along the banks of the reservoir allowed the launching of pleasure boats (and elephants).

Smaller gardens, also geometrically designed, were laid out in the courtyards of princely residences. Many such gardens can be found in the great citadel-palaces of the Mughal emperors at Agra, Delhi, and Lahore. Those quadrangles reserved for the harem were particularly beautiful. Shah Jahan's Rajput vassal, Jai Singh I (1621–67), added buildings to the Amber citadel. Shimmering in the lake below the citadel, there is a magical terraced island.

Curbing around its flower beds forms diverse geometric patterns. A rope-and-pulley system contained in a series of “elevator-towers” allowed women of the harem to be lowered from the citadel down to the garden.

The third type of formal garden is the tomb garden, best known through the example of the Taj Mahal, which was built as a mausoleum for Shah Jahan's favourite wife, Mumtaz Mahal, at Agra. Shah Jahan began work on the project in 1631 and had Mumtaz Mahal's body brought there after six months. It took 12 years to complete the mausoleum and another 10 to complete the gardens.

The gardens are preceded by a forecourt that contained religious schools and two other women's tombs. Beyond was another court with caravansaries (lodgings) and bazaars catering to pilgrims. A magnificent gate brings the visitor into the four-fold garden that lies in front of the gleaming white mausoleum. Many canal-walkways criss-cross this most elaborate of Mughal gardens. In its centre lies a large pool with lotus-petal contours. A mausoleum, elevated on a red sandstone platform, stands at the end of the garden, overlooking the river. Smaller buildings of the same red sandstone, a mosque and a guest house, are situated on the extremities of the platform. A second platform, faced in marble, supports the Taj mausoleum. Four slender minarets sit at its corners, framing the dome of the Taj. (Mughal authors compare the shape of the dome to a guava).

Not only the garden follows a geometric scheme. The plan of the mausoleum's interior conforms to a Persian design that divides a square into nine parts—a central dome with eight rooms or arched halls around it. The division of space is derived by inscribing an octagon in the square. This layout is called Eight Heavens (*Hasht Behisht*), and like the four-fold garden plan, refers to Paradise. In Iran this building type had been used indiscriminately for mausoleums and garden pavilions. Which usage came first is not clear; however, the concept of Paradise, which is key to Islam, led to an early blending of ideas of tomb and garden. Tombs are frequently referred to as gardens in Islamic literature. The Mughals were the first Muslims to build



The terraced gardens below the Amber Citadel form a miniature version of the famous gardens of Shalamar. They lie on an island in a spectacular setting comprising an artificial basin.

PHOTOGRAPH BY LISA GOLOBEK

formal gardens as monumental tomb settings; the earliest was built for Humayun, Babar's successor, at Delhi by his son Akbar in 1571. This magnificent red sandstone mausoleum, also with an Eight Heavens plan, lies in the centre of a four-fold garden. Mughal tomb buildings were not always built to this plan, but burial in a formal garden became the rule.

What is most surprising and ironic is the change in the depiction of Nature. Formerly, plant life was rendered in a manner as idealized as the Persian garden itself. The term "arabesque" describes the abstraction of vegetal motifs to ornamental formats. However, the vegetal ornament on the Taj Mahal displays naturalistically rendered plants. Stems sway and leaves twist and turn. Blossoms curl and wither.

These are not the plants of the Persian painters employed by the Mughals but rather those of the Jesuits and other Europeans who introduced illustrated herbals.

The Portuguese founded a trading colony at Goa in the 16th century. Akbar, who by then was emperor, entertained them at his court and received European paintings and books as gifts. Around the turn of the century the English and Dutch established their own East India companies and introduced the Mughal court to European artistic conventions, including aerial perspective and use of the vanishing point. These new ideas were reflected in Mughal painting and in the growing interest in portraiture as a genre.

Realistic plant motifs were carved in marble as well as inlaid with colourful



hardstone veneers by local craftsmen who adapted the Italian technique of *pietra dura*, introduced by Florentine lapidaries. The design was drawn on the marble and material removed with a drill. Hardstones, such as agate, jasper, lapis, and malachite, were carefully selected for their veining, which resembles the textures of such features as petals and leaves. The love for naturalistic representation of plant and animal life suffused all media, from ivory carving to textiles. Yet the gardens in which these plants took root remained true to their idealized forms, untouched by the prestige that European material culture had acquired in the Mughal court.

How did the Mughals reconcile these seemingly contrasting views? First, look back to Babur. He had a great interest in horti-

culture and viewed the formal garden as laboratory for agricultural experiments. Other Mughal princes pursued similar horticultural interests. Yet they distinguished between their interest in scientific observation of detail and the larger context into which these details fitted, the garden, which could remain an idealization.

Similarly, the Mughal rulers were intensely interested in individual personalities, which they believed could be studied from portraits. But this did not imply that such persons had to be placed in a realistic setting. So while the Mughal patrons of the garden were content to borrow European modes of representation for individual flora and fauna (including humans), they continued to view the world as a landscape ordered by divine geometry. ❖

While the Mughal patrons of the garden were content to borrow European modes of representation for individual flora and fauna, they continued to view the world as a landscape ordered by divine geometry

THE JOEY AND TOBY TANENBAUM GALLERY OF BYZANTINE ART

*In this new gallery, as it once was in fact,
the Byzantine world bridges the ancient and modern
worlds, as well as the East and the West*

SANDRA SHAUL PHOTOGRAPHY BY BRIAN BOYLE



Detail from a large floor mosaic showing a rooster within a grapevine and an inscription dating the piece.

IN 313, EMPEROR CONSTANTINE THE Great of Rome issued the Edict of Milan, which allowed Christians to worship freely within the empire. Eleven years later, in 324, he moved the capital of the empire from Rome to Byzantium, an ancient Greek town, which he renamed Constantinopolis, now commonly known as Constantinople. The dedication of Constantinople as the capital in 330 came to mark a new phase in the his-

tory of the Roman Empire and its Christianization. Power gradually shifted towards the eastern Mediterranean, and a new empire emerged. In the 16th century, humanists named this the Byzantine Empire.

At its greatest, during the reign of Justinian I in the 6th century, the empire extended around the Mediterranean from Spain to Syria, building wealth through the control of trade routes linking Europe, Asia, and

Objects to Promote Health and Healing

The Early Byzantines looked to God, the saints, physicians, and the power of magic to cure and prevent illness. Some objects associated with good health and healing include (from left to right): a reliquary case, a pilgrim token, a votive cross balanced on a leg, an armband inscribed "Mother of God help Anna," and an eulogia that may have held holy water.

...and Images of Faith

Church frescoes depicting saints and other religious figures were meant to teach doctrine and to intensify the religious experience. Pictured here are an elderly saint, Notos, god of the south wind, and a grief-stricken portrayal of Mary, the Mother of God.



Africa. Justinian erected the magnificent church of Hagia Sophia in Constantinople in 532–537, the focus for Byzantine Christianity. Linked by religion and the common language of Latin and then Greek, the empire's population represented an extraordinary diversity of cultures, which came to influence each other and those in neighbouring lands, including Anglo Saxon, Islamic, Viking, and Merovingian.

The Byzantine Empire endured for more than 1000 years in various forms as territories were won and lost to Islamic armies, to the Crusaders, and finally to the Ottoman Turks who captured Constantinople in 1453 and changed its name to Istanbul. It presents a fascinating picture as Greek, Roman, and other long-established cultures were assimilated in varying degrees into the developing Christian culture. Early Western art was profoundly influenced by Byzantine art, especially 14th-century Italian panel painting. Orthodox churches the world over still carry on the Byzantine traditions of belief, liturgy, artistic expression, and iconography.

Today visitors can capture some sense of this rich and vital period of human history at the Royal Ontario Museum. The new Joey and Toby Tanenbaum Gallery of Byzantine Art is strategically located among the galleries of the Mediterranean World, surrounded by displays of artifacts from ancient Egypt and Nubia, Mesopotamia, Iran, Greece, Rome, and the Islamic civilizations.

On the same floor as this suite of galleries are the Samuel European Galleries, displaying the history of the European world dating from just before 1000 to the present. In the Museum's galleries, as it once was in fact, the Byzantine world bridges the ancient and modern worlds, as well as the East and the West.

The new gallery is an elegant airy space, decorated on one wall with a large, striking mosaic, once part of the floor of a Byzantine home or public building. Mosaics, made from small bits of limestone displaying a broad range of natural colours, were popular for their durability as well as

for their decorative quality.

A rooster within a grapevine and an inscription placed within a wreath form part of the intricate and colourful design of this piece. The inscription reads: "The mosaic was finished on the 15th of April, in the 10th indiction year, of the ..., in the year 104." This means that the mosaic was made in the 104th year of the city from which it came, and during the 10th year of one of the 15-year cycles of the emperor's reign, which by today's calendar corresponds to sometime between 300 and 354.

To the right, marking the introduction to the gallery's displays, there is another important mosaic (c. 400 to 500), this time making a classical reference to Artemis, goddess of the hunt. The mosaic tradition continues to this day; the ceiling of the ROM's main entrance rotunda, decorated in Venetian glass mosaic tilework, is an excellent example.

An overview of Byzantine history forms part of the introduction, and provides information about the social structure, events, and achievements of the era. As in the Roman world, Church and State were one; the emperor ruled as the supreme authority and as the earthly representative of God. The legacy of Byzantium includes not only the foundation of the Orthodox Church, but also the creation of the Cyrillic alphabet, and preservation of writings from the early Christian Church. Exiles from Turkish invasions brought with them ancient Greek literature, philosophy, and language. Byzantine codes of Roman and later laws influenced the development of western law.

Passing from the introduction section, visitors encounter the most intriguing objects in the gallery—those pertaining to religion. This subject is covered in displays on the themes of formal religion; popular religion; faith, medicine, and amulets; and icons.

I have always been fascinated by relics. The cult of relics began in the 4th century with Helen, mother of Constantine, who supposedly discovered the True Cross. Relics, usually kept in beautiful cases, could be the physical remains of a saint or some-

Objects for Worship

Two censers, showing a range of Byzantine artistic styles, would have been used for carrying incense in Church. The image of God blessing three military saints appears on this steatite icon (far right).

...and Images of Salvation

Crosses were worn and carried not only as symbols of Christian belief but also as a sign of salvation and protection from evil.



thing thought to have come into contact with a holy person or object. It was believed that relics embodied the presence of Christ or a saint, and therefore had the power to cause miracles or cure maladies. The ultimate expression of the veneration of relics is the Church of the Holy Sepulchre in Jerusalem. This church, located on the site of Christ's tomb, was built by Constantine.

Pilgrims from all over the Christian world flocked to the Holy Land and the shrines of important saints in the 4th century. Of their many reasons for making such journeys, one was to obtain an *eulogia*, an object blessed by its contact with a saint or something holy. Somewhat like relics such objects were considered to possess supernatural powers to counter evil and work miracles.

Icons are now considered an integral part of the Eastern Orthodox Church. Yet at one time they were controversial. Emperor Leo III banned icons in 726 for fear of idolatry. The period of Iconoclasm endured until 843 when the restoration of the veneration of icons was proclaimed, after which icons, like those on display in the gallery, proliferated.

Facing the displays of religious objects are those associated with daily life, including ceramics, eating utensils, crosses, personal adornments such as rings, and belt furnishings. The rings are very touching because they are engraved in ways still popular today.

As I've learned so many times before at the ROM, manufactured objects, no matter how plain or ornate, simple or complex, are inventions that have resulted from a new need. This certainly applies to belt buckles. The beautiful buckles on display are a reminder that wearing trousers secured by a buckled leather belt only became fashionable in Eastern Mediterranean cities around the fourth century. Migrating tribes from colder climates introduced trousers to the Romans and the Byzantines.

An important aspect of Byzantine life was trade and commerce. Because of its location between Europe and Asia, Constantinople became an international metropolis attracting merchants and travellers from all over the known world. Silk, spices, and luxury goods came from China, Persia, India, and Africa. A large and powerful bureaucracy evolved, which regulated all aspects of the economy, from the issue of a common currency and standardized weights to controls on wages and prices. Some silver objects were stamped with control marks to guarantee the purity of the metal. Other security devices and weights and measures have been brought together as a small display on this subject.

Among the most striking objects in the gallery are those made of glass. Undoubtedly beautiful at the time they were made, some of the flasks, jars, and other pieces from the region of Syria-Palestine have had their appearance enhanced over time through the development of a colourful iridescence on their outer surfaces.

Gold jewellery is attractively displayed in the centre of the gallery. Among the pieces, wedding rings are of special interest for they provide insights to Byzantine life by showing the influence of Christian religion on marriage (see *Rotunda*, volume 28 no. 3, winter 1995/96). What I find most interesting, however, is the design of the jewellery, which seems so contemporary. In fact, Byzantine design has remained appealing for more than a thousand years, and is still being emulated, knowingly or unknowingly, by today's designers.

A look back at the Byzantine world through the Joey and Toby Tanenbaum Gallery of Byzantine Art provides insight into the transition and continuation of Western society from the classical to the Christian era. It is also exciting to imagine its capital, Constantinople, as a cultural mix that could rival the most cosmopolitan cities of today. ♡

The Art of Glass

Beautiful glass from the Late-Roman-Byzantine Syria-Palestine, which was produced more than 1500 years ago, has developed a striking surface iridescence.

...and Byzantine Gold

Byzantine jewellery design still looks fresh today. The symbols on wedding rings show the influence of classical and Christian beliefs on the wedding ceremony. Fancy belt buckles evolved as belts became necessary when trousers came into fashion.

The Royal Ontario Museum is grateful to Joey and Toby Tanenbaum for their gifts of artifacts to the Museum's collections and for their generous contribution which made possible the development of this gallery.



*Drawings
at the ROM
are more than
pretty pictures*

HOWARD

COLLINSON

PHOTOGRAPHY BY

BRIAN BOYLE



DRAWING

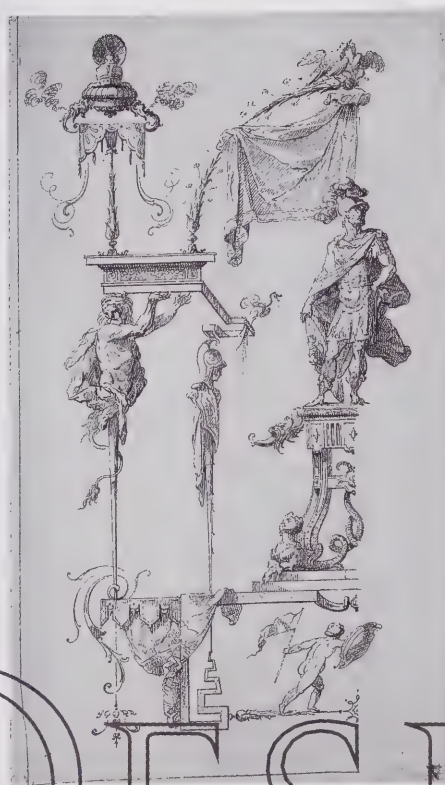
From left to right: Design for a Mirror Frame, 1714-1716, pencil and ink, by Dubuisson the Elder. This drawing helps to explain the duties and responsibilities of those involved with the decoration of an interior.

ABOUT 1714, THE ARCHITECT CLAUDE-Nicolas Le Pas Dubuisson the Elder produced a quick drawing of a carved wooden frame for an overmantel mirror in the restrained yet opulent French Regency style of the early 18th century. The mirror was to be part of the interior that Le Pas Dubuisson was designing for the Paris residence of the Comte de Maumont. An inscription indicates that the drawing was intended for the carvers Delcour and Dupin. Although it is not highly detailed, the drawing probably formed part of the contractual agreement between the architect, acting as general contractor, and the carvers, and it is as a legal document that the drawing has survived.

Today this drawing is valuable for it provides evidence that helps to explain how such building interiors were created. It confirms that the architect, not the craftsmen, was responsible for the design and the choice of the panelling. Combined with other documentation, the drawing establishes the relative artistic and economic importance of the various professions involved in such work.

The drawing now belongs to the ROM's collection of European prints and drawings focusing on the history of decorative arts and ornamental styles. One of the few collections of this kind in North America, it provides information that contributes to the understanding of the design and pro-

Howard Collinson is head of the Department of Western Art and Culture at the Royal Ontario Museum



ON DESIGN

duction of objects over the last 500 years. As such, it complements the Museum's European collection of objects ranging from eating utensils and paperweights to major pieces of furniture.

Unlike the collections of most art museums, the ROM's "art collections" are selected only in part for their aesthetic merit. It is at least equally important that they have significant intellectual and historical content. They may reflect such issues as an important stage in the history of European style, provide particularly telling information about how things were made, or give insights into the status of decorative arts at various points in history.

Sometimes, however, the drawings in the European collection document the appearance or manufacture of a type of object

that the Museum cannot collect. Works on paper can make possible the representation of the evolution and meaning of decorative style in a fuller range of media and contexts, including everything from ceremonial processions to complete interiors.

For example, although they are essentially forgotten at the end of the 20th century, coaches and carriages were once important status items, highly ornamented in fashionable styles. A design for the rear of a grand Baroque coach is the subject of a drawing dating from the 1680s by the Roman artist Filippo Passerini. Carved and gilded, with a plush and elaborate interior, such a coach was a piece of furniture on wheels that cannot be matched by even the most luxurious modern automobile. In constructing a picture of the role and na-

Design for a Poster, 1896, pen and ink wash, by C. Martin. Was Monsieur Martin acting as an artist or a designer when he produced this drawing? Design for a Grotesque, 1730s, pen and ink, by Gilles-Marie Oppenord. The grotesque became a major element of Rococo ornament.



IN EACH DRAWING A PIECE OF THE HUM.

Drawing of a Gauntlet, 1800s, pencil and white body-colour, by Viollet-le-Duc. The drawing was inspired by study of the history of decorative arts in the 19th century. Two Studies for Wall Paintings, late 19th century, by A. Moreau-Neret. The paintings, with the emblem of the French Republic on the top, were probably for a public building.

ture of ornament and style in the Baroque world, it is necessary to include all the manifestations, not just those which are easily collected in museums.

Largely overlooked by art historians in recent decades, ornament was an important genre within European art until the beginning of the modern era. Certain drawings are useful as documents of the evolution of abstract ornamental style. Although ornament designs were ultimately intended for use on objects, their evolution can be traced in its purest form through works on paper.

A drawing from the 1730s by Gilles-Marie Oppenord, an architect and designer working in Paris, reflects an important step in the formal development of an ornamental formula called the "grotesque." In the late

15th century, wall paintings were discovered in Rome in ancient underground rooms, which were much like grottos. Because of their location, the paintings were called *grotteschi*. They inspired Renaissance decoration that always included a two-dimensional framework above a three-dimensional base, thereby playing with the visual tension created between flat and illusionistic three-dimensional elements. The grotesque remained a mainstay of European ornament through to the mid-18th century.

Oppenord was a force for the evolution of grotesque design into a major element of Rococo ornament. The ROM drawing may record a design for a painted interior. With its highly disciplined pen strokes and clear, bold design, the drawing is an elegant example of this ornamental genre.



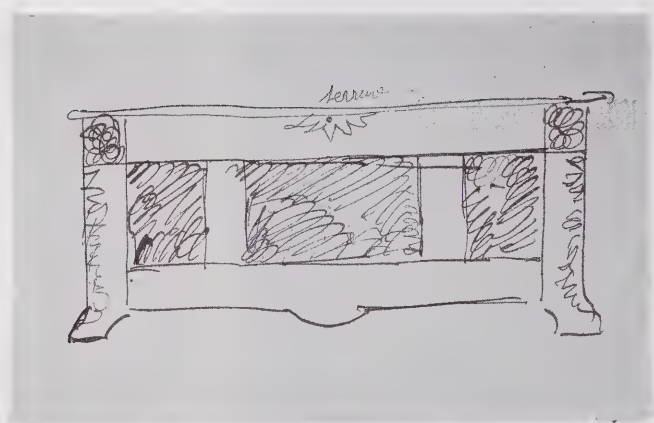
THE STORY IS RECOUNTED IN DETAIL,

Other drawings in the ROM's collection document the systematic study of the history of decorative arts that took place in the 19th century. Illustrations of older works were made both as models for contemporary designers, who were creating the popular "revival" styles, and for the scholarly study of the evolution of style. These two goals were often inextricably merged. Eugène-Emmanuel Victor Viollet-le-Duc was one of the most influential figures of the 19th-century French art world. An architect and designer, he wrote several large books about historic architecture and design. He not only wrote about medieval art, he restored medieval buildings and created his own work using the stylistic principles he attributed to the art of the Middle Ages. His delicate and sensitive drawing of a 15th-cen-

tury gauntlet is a design for an illustration from the *Dictionnaire du Mobilier Français*, his six-volume study of medieval decorative arts, published between 1854 and 1875.

Dating from later in the 19th century, *Woman in an Egyptian Dress* by Henry Holiday also shows the emergence of interest in historical style. Noted as a designer and maker of stained glass, Holiday also designed costumes for the Society of Historic Costume gala evening of 1896. Holiday received advice for his Egyptian designs from Sir W. M. Flinders Petrie, one of the great Egyptologists of the era. Petrie later asked Holiday to illustrate his own work on Egyptian costume. The ROM's drawing is a design for one of the illustrations in Petrie's book. Holiday designed windows with Egyptian themes, such as those in the

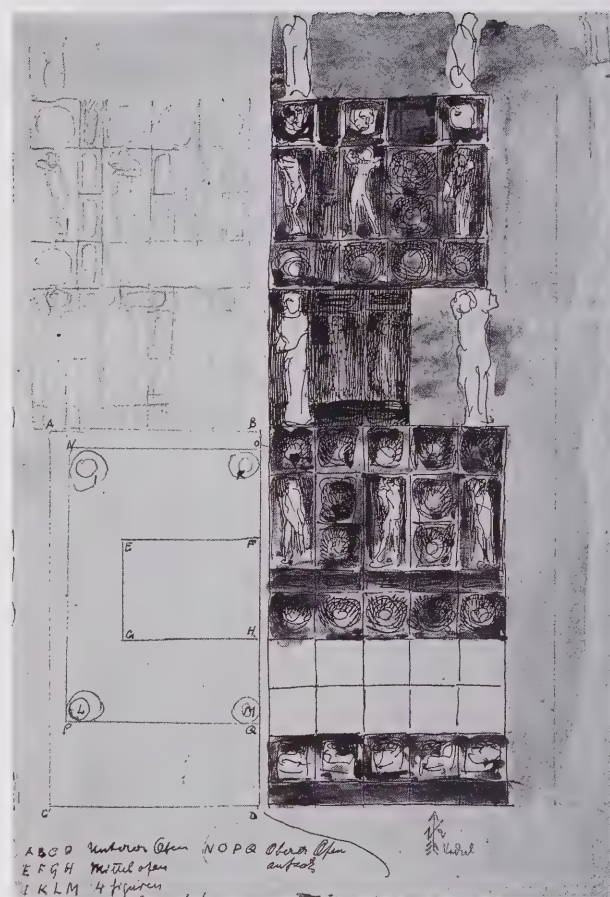
Woman in Egyptian Costume, 1890, bodycolour on paper, by Henry Holiday. In consultation with Sir Flinders Petrie, one of the great Egyptologists of the era, Holiday designed this costume for the Society of Historic Costume gala evening of 1896.



Design for a Chest, c. 1900, pen and ink, by E. Bernard. The artist's attention to handicrafts reflected the rising status of crafts as a medium for artistic expression. Drawings for a Tile Stove, 1910, by M. Klinger. A celebrated artist, Klinger turned his talents to design the stove and to model each tile as a small sculpture.

Lillian Massey Building (which houses the offices of the Ombudsman of Ontario) across the street from the ROM. He was an acquaintance of Charles Trick Currelly, first director of the Royal Ontario Museum of Archaeology, who had worked under Petrie in Egypt.

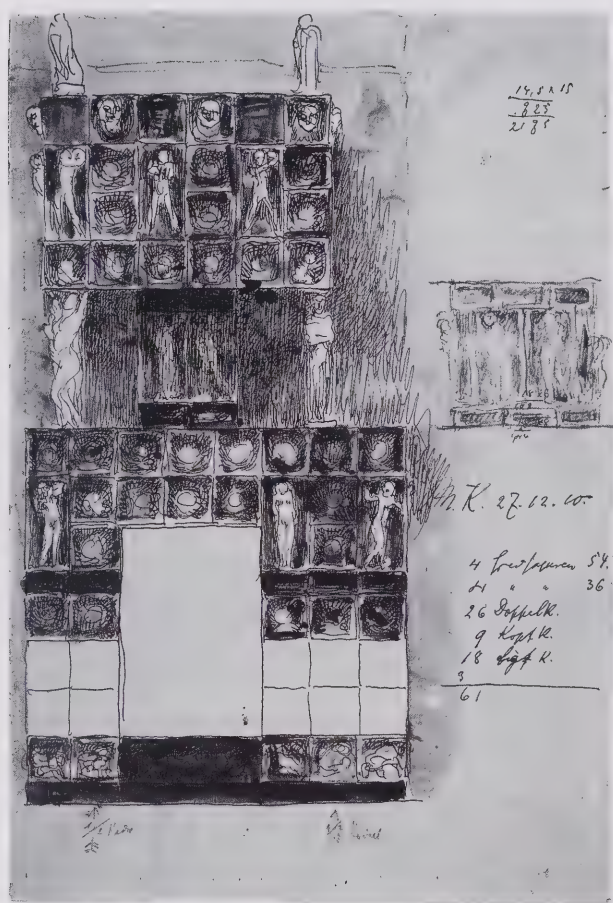
In the 1850s and 1860s, Japanese decorative arts became another inspiration for European design motifs. This is evident in a drawing by Felix Bracquemond. Bracquemond, a French painter and printmaker, was one of the first and most enthusiastic of the European artists to be influenced by Japanese decorative style. Not only did he create pictorial works that were based on Japanese motifs and styles, he was inspired by Japanese design to create works of decorative art. During the 1860s and 1870s, he



designed several sets of porcelain tableware for Haviland featuring *Japoneseque* asymmetrical close-up views of animals or freely composed landscape scenes.

The decoration on the pieces was produced by transfer printing, a technique similar to decal. A copper plate was used to print the image onto paper. The paper was then placed on the ceramic surface and moistened. When the ceramic was fired, the paper burned away, leaving the coloured image. The ROM collection includes an impression of the image on paper, which probably came from the factory's archive, as well as Bracquemond's original drawing, which may have been kept as a guide for the porcelain painters who applied colour within the printed outlines.

The late 19th and early 20th centuries



VALUE FOR BETTER UNDERSTANDING

saw a number of painters and sculptors extend their talents to the execution of decorative arts. Emile Bernard, along with his friend Paul Gauguin, was very interested in traditional crafts of Northern France. In addition to his paintings and prints, Bernard designed and created objects in various genres, from tapestry to furniture. The ROM's *Design for a Chest*, c. 1900, shows a typically rustic peasant-style trunk. The quickly scribbled lines indicate shallow reliefs, which would have decorated its side panels. This attention by artists to traditional handicrafts reflected the rising status of the crafts as a major medium for artistic expression and the use of more abstract style.

Two Drawings for a Tile Stove by Max Klinger are a case in point. During his lifetime, Klinger was one of Europe's most ac-

claimed artists. His paintings and especially his multi-coloured stone sculptures are still recognized as important pieces of late 19th-century German art. The ROM's drawings are designs for a traditional Central European ceramic tile stove. A stove similar in design survives in Klinger's home outside Leipzig. Dated 1910, the ROM drawings are valuable evidence that Klinger contemplated this project for at least a decade before producing the tiles in 1920. They also show the calculations necessary for such a project, including a tally of the number and kinds of tiles required.

Klinger not only designed the stove, but actually modelled the tiles himself. The tiles of such stoves frequently have three-dimensional decoration. Klinger created small white nude figures in the recesses of blue

Design for a Panel, 1870s, water-colour and pencil, by F. Bracquemond. The panel shows the influence of Japanese design and motifs.



Design Drawings: Recent Acquisitions
is on display at the Royal Ontario
Museum until 19 October 1997.



THE PURPOSE OF DESIGN TODAY

***Design for a Plate,*
c. 1875, by
F. Bracquemond.
The large pencil
and watercolour
drawing was the
original for the
etching (above)
that was transfer-
printed to a
ceramic surface.**

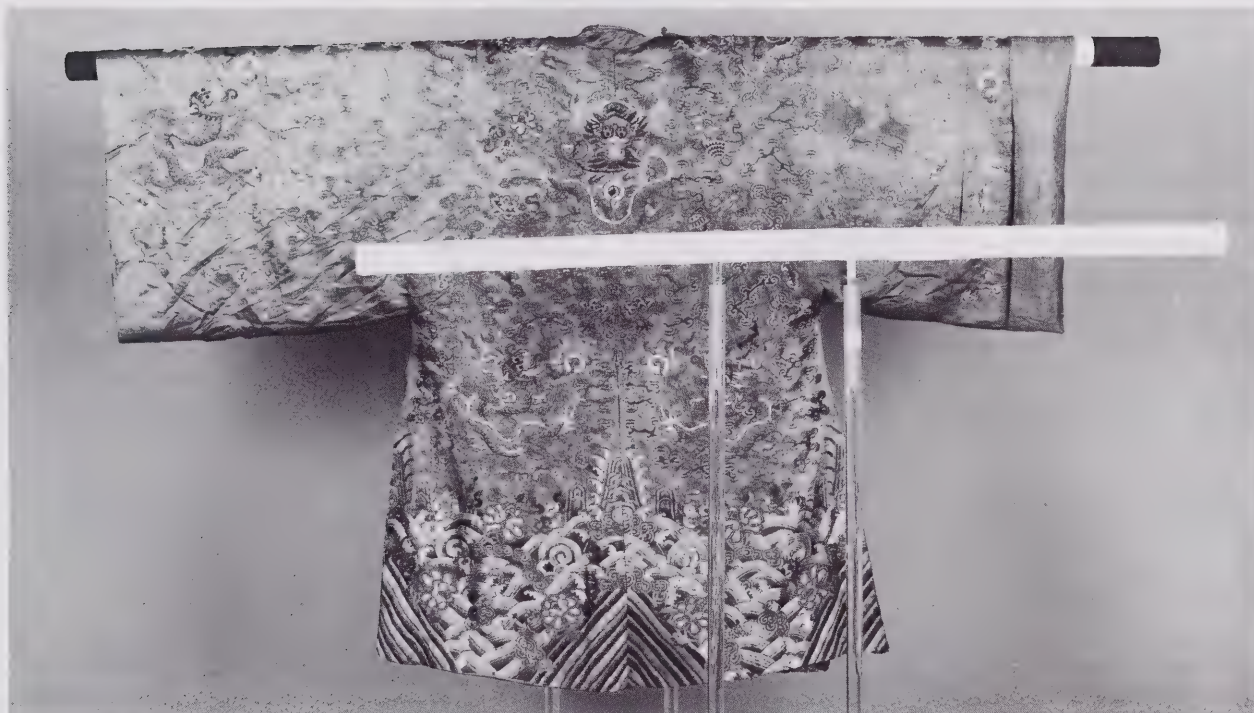
tiles. Each of the tiles is, in essence, a small Klinger sculpture. This was a conservative return to traditional methods and ideas of craft in the midst of the modernist drive of the art world at the turn of the century.

Studies for *La Danse* and *La Musique*, two wall paintings, by Adrien Moreau-Neret, likely dating from the 1880s, were probably created for a large public building, presumably a theatre. The emblem of the French Republic appears at the top of the richly coloured paintings, which would have been designed to fit a lavish Belle Epoque interior.

For some artist/designers, the traditional distinctions between art and craft were irrelevant. Camille Martin, the designer of the 1896 *Poster for the Bal des Etudiants* is typical of this group. Based in

Nancy, an important centre for Art Nouveau decorative arts production, Martin designed glass and furniture in addition to working as a painter and printmaker. Would his poster design qualify as part of his work as an artist or as a designer? During the 1890s, as fine art became more explicitly decorative and decorative art reflected the same style, the two fields merged to an astonishing degree.

All these drawings are from a growing archive that allows the ROM to reflect more completely the history of European fine decorative-art objects from their form and use to their significance to those for whom they were created. A piece of the human story is recounted in particular detail, both for its own interest and for its value for better understanding the purpose of design today. ☼



To display garments properly, many factors must be considered, from environmental to the condition of the piece. Because of its straight-line cut, a kimono can be easily displayed without creating stresses or creasing to the fabric.

Displaying Your Textiles

AS THE NUMBER OF TEXTILE COLLECTIONS belonging to institutions and individuals increases, interest in the collections and questions related to their display are also increasing. Because clothing and costumes are three-dimensional, they are among the most difficult textiles to display. Exceptions are sleeveless and T-shaped garments, such as kimonos, ponchos, and T-shirts.

The technique often used in museums involves displaying the garment with arms extended by means of a rigid support inserted through the sleeves. This ensures even distribution of the weight throughout the upper part of the garment and, when done properly, also prevents creasing. As with any technique, certain conditions must be fulfilled for a successful display.

Before such a method of display is used, a garment should be carefully examined to ensure that it is in good

condition. The upper area, particularly along the shoulder and necklines, should have no signs of weakness, such as fraying seam lines, or tears. Only garments showing a perfectly straight line are appropriate for this display technique. Any curve or angle in the top line will require adjustment of the support. If this is not done properly, distortion of the garment will result.

Garments with a stability problem, such as heavily decorated garments (for example, a 1920s beaded dress) and stretchy garments (loose knit, bias cut), are not good candidates for this technique. The weight of the decoration or the stretch in the fabric would, in the long term, cause distortion, and permanent damage is a possibility.

The final factor to consider is the maintenance of the garment. Can the piece be safely washed or dry cleaned? If this is not possible, or if

cleaning must be restricted to prevent wear, make sure to select a display method that accommodates these inherent limitations.

The top of the rigid support, which is in direct contact with the garment, should be rounded. This avoids sharp edges, which may stress the garment at the points of contact, and allows the textile to fall smoothly in the front and back. The thickness of the support should be proportioned to the shoulder line. Though a large circumference provides beneficial surface for support, it should not exceed the thickness of the shoulder for which the garment was designed. When the support is too thick, the garment does not hang properly and unnecessary stress can result.

A plexi rod or tube covered with blue pipe insulation or polyester felt is one type of support usually used in the museum environment. The

pipe insulator or polyester felt add both volume and padding, the latter providing a smoother final effect. A layer of 100 per cent cotton, preferably white or unbleached, is sewn over the cushioning material. For aesthetic reasons, coloured fabric can be added afterwards over the basic covering fabric in appropriate areas when the garment is on display.

All mounting fabric should be washed prior to its use. The washing should be done with a mild detergent that contains no bleaching agent and should be followed by two rinses in clear water. Coloured fabric should be tested for colour-fastness to prevent risk of permanent staining by dye transfer.

The rigid support can be erected in various ways. It can rest on a free stand, be held by brackets to a wall, or be suspended from the ceiling. The width of the gap between the support and the wall or ceiling should be sufficient to accommodate the garment and allow for air

circulation. Also, the distance from sleeve tip to sleeve tip should provide adequate space so that the garment is fully extended.

The last consideration involves environmental factors. Typically textiles are very sensitive to light and should not be displayed in direct sunlight or under strong artificial lighting. Proper maintenance includes inspection for insect activity, and gentle vacuuming to prevent the accumulation of dust. The vacuuming should be done with a low-suction vacuum cleaner with a fibreglass mesh placed over the nozzle. The nozzle is carefully passed over the garment avoiding direct contact with the textiles. A soft brush can be used to lift and push the dust towards the nozzle.

It may be desirable to place the textile out of easy reach to limit unnecessary handling. To minimize handling and to protect it from dust the garment can also be placed in display cases. The piece should not be placed near a direct heating source or air conditioning unit. Also

keep in mind that entrance halls and staircases are places where dirt accumulates rapidly.

The length of time a piece can be safely displayed depends on the quality of the mounting, the handling, the ambient conditions such as light level, temperature, humidity, and pollutants. In a museum six months or less is usually the recommended period.

Though the ageing process of a textile on display can not be arrested entirely, an appropriate mounting technique, careful monitoring and good housekeeping, and the provision of a stable and proper environment can slow down the degradation and allow others to enjoy the textile.

For further information on the subject you can consult the Conservation Department of the Royal Ontario Museum.

ESTHER METHÉ

Esther Methé is a textile conservator in the Conservation Department, Royal Ontario Museum



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ROTUNDA
the magazine of the Royal Ontario Museum

In the Fall/Winter issue of *Rotunda*...

Sounds Deadly to Whales

By Cheri Reeshaw



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ROM ANSWERS

Dear ROM Answers,

This pottery statue or urn has been in the family since the early 1900s—the exact date (like much else) is unclear. My grandfather lived in Mexico from 1899 to 1910 and acquired the piece while there. It isn't known where he obtained it (he travelled widely for his work), or whether it was a gift or a purchase.

The statue is 30.5 cm (12 inches) high, 24.1 cm (9.5 inches) wide, and 14.0 cm (5.5 inches) deep, with a cavity or pouch on the back side. The pouch top is located below the level of the figure's eyes, which are hollow. Perhaps they burned something in the pouch? I asked my father, who was born during the stay in Mexico, about the obvious signs of breakage and clumsy repair. He said that as far as he knew all the damage occurred after the piece was in the family—the result of inadequate protection from four growing boys and frequent long-distance moves.

Now the statue is mine and I'm hoping the ROM can tell me more about it. Perhaps it's a fake—my grandparents both spoke fluent Spanish, but I don't think they were serious students of Mexico or its artifacts. If the piece is real, where is it



whatever information you can provide. Thank you.

ANON., CANADA

Dear Anon.,

As is true of every apparent archaeological object that has lost its context, a fair amount of uncertainty surrounds your figure, which on the basis of style can readily be identified as a Zapotec funerary urn from the Mexican state of Oaxaca. It represents one of the Zapotec gods, and like other objects of its class its final resting-place was very probably a niche in an elite tomb. "Standard" urns were designed for use as incense burners and have a cylindrical container at the back that your specimen, like some in museum and other collections, lacks. Many such urns without context exist in museum and private collections throughout the world—and many of them have

been known or suspected for many years to be modern forgeries. Until fairly recently the principal clues to the forgeries have been matters of style: a headdress that identifies a particular deity combined with a chest ornament of another god, or a figure depicted standing when all known authentic depictions show the deity seated, or a combination

If you possess furniture, silver, glass, metalwork, ceramics, textiles, or small decorative objects that may have an interesting past and have aroused your curiosity, this column is for you. Send a clear black-and-white photograph (or 35-mm colour slide) of the object against a simple background, providing dimensions, a description, any markings, or any known details of its history to: ROM Answers, c/o Rotunda Magazine, Royal Ontario Museum, 100 Queen's Park, Toronto, Ontario M5S 2C6. Be

sure to enclose a stamped, self-addressed envelope large enough to include any photos that we must return to you with the reply.

Neither Rotunda nor the author nor any other person who may be consulted assumes any legal responsibility for these opinions or their ramifications. No financial appraisals will be offered. If your query is selected to be published in the column, only your initials and city will appear, in order to protect your privacy. Letters will be acknowledged as staff time comes available.

of a modern potter's pure imagination with a pastiche of ancient forms and symbols. I am no expert in the archaeology of the Oaxaca Valley, but on first examination of the photographs I was able to say that there was nothing specific about your figure that suggested modern manufacture.

The fact that your grandfather acquired the piece between 1899 and 1910 might appear at first glance to be virtual proof of authenticity, because to most the time seems too early for forgery. The fact is, however, that there is ample proof that skilled forgers of Zapotec urns were at work in Oaxaca before the turn of the century. Several major museum collections, including the ROM's, were acquired before World War I, and all of them contain large numbers of fakes.

Because my knowledge of Oaxaca archaeology is limited I sent the photographs to an expert in the area, who stated unequivocally that

the piece is authentic. Although some might take this as sufficient, my archaeological experience inclines me to caution, especially when the expert has seen only photographs and not the object itself. For this reason I sent the photographs to a second expert, who noted the crudeness of execution of many elements and the rather odd combination of some features, and suggested that the piece might be authentic, but the product of a rather unsophisticated rural maker. He hedged his statements by saying that he would have preferred to see the artifact, because examination of the ceramic body and the surface condition can assist materially in identifying a piece as modern, and can sometimes buttress a judgement that an object is ancient.

This leaves us still in a state of some uncertainty. What I would suggest is that you submit the object for thermoluminescence testing, which has helped to sort out problems in many museum collections. Al-

though the test may not yield a correct date, it almost always distinguishes between a modern object and an ancient one. Unfortunately the ROM does not have the facilities required for TL testing, but there are several laboratories in the United States and Europe that undertake such work. If you decide to take the step, which requires only the removal of an almost invisible sample from the specimen, I shall be very interested to learn the result.

DAVID M. PENDERGAST

David Pendergast is vice-president, Collections and Research, and a curator specializing in Maya civilization in the Anthropology Department, Royal Ontario Museum

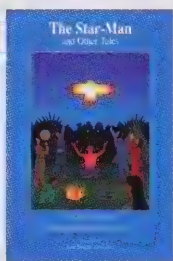
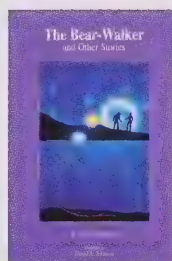
Postscript: Anon. took my advice. The TL testing yielded a date of 700 to 1000 years ago, and the response of the second expert when I transmitted the news to him was "The urn date is indeed plausible. I am glad that she did the TL testing." D. M. P.

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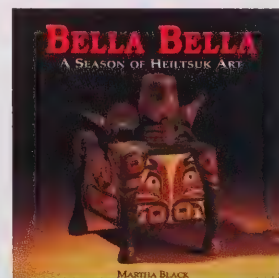
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Modern Chinese Art, Historical Pistols and Maps, Canadian Designer J. E. H. MacDonald, and Toronto Architect William Thomas

ANYONE REMOTELY INTERESTED IN Chinese painting is likely to own a tattered copy of at least one book by Michael Sullivan, the now-retired Oxford don who has devoted his life to interpreting the subject for Western readers. Perhaps the most commonly cherished is his 1959 survey, *Chinese Art in the Twentieth Century*. For years—decades, in fact—it was the most important and most widely available English-language discussion of modern Chinese painting, a subject that has of course usually been overshadowed by the powerful millennia-old influence of traditional Chinese art, whose ideas “—apart from Buddhist ones—were purely Chinese, as were the styles and forms that gave those ideas expression.”

Now Sullivan has published a new title, **Art and Artists of Twentieth Century China** (University of California Press, US\$65), a large and stately book, full of generous plates and the most fascinating material, including sketches, design oddments, even newspaper illustrations. It's the culmination of Sullivan's long wrestling-match with the sometimes precarious (and occasionally hilarious) influence of Western ideas on Chinese art: a book that must inevitably become, almost overnight, the standard work on its subject.

Sullivan opens with a brilliant summation that I believe is worth quoting at length: “If, around 1900, one had entered the studio of a Chinese artist—even the rare artist who painted by electric light—one would have discovered no hint of foreign

influence on his painting. He would have been astonished at the suggestion that there was anything lacking in his art, that his forms were not always accurately drawn, that his perspective was false, that there was no shading or cast shadows—in short, that his painting was not true to life. He would have replied that these technical devices had nothing to do with real art, which was an expression of the feeling and personality of the artist, and of a generalized view of the world of experience in which individual things only had meaning as aspects of the whole.”

Our hypothetical Chinese artist, Sullivan continues, “would have found just as alien the Western idea that a picture . . . could be built up by means of preliminary sketches into a deliberately thought-out composition. In traditional Chinese painting (*guohua*) all these elements that so stimulate and challenge the Western artist, and interest and please the Western viewer, would have seemed of little value when compared with the effect of wholeness and harmony that he aimed to achieve. Moreover, the idea that he should depict unedifying, violent, or prurient subject matter would have been unthinkable to him; such things denied the very purpose of art, which was fundamentally ethical and philosophical” [rather than aesthetic].

How this attitude changed, and the extent to which it has, is a remarkable story of cultural give-and-take that follows the sharp ups and downs of Chinese history this centu-

ry. If modernism in Western art was, as it's often called, a revolution in taste, then the equivalent change in China paralleled a number of actual revolutions and wars, starting with the overthrow of the last dynasty in 1911. In the post-Maoist period of today, art in China, like so many other aspects of life there, is both inward- and outward-looking, as free-market ideas clash with demands for political reform in such a way that no resolution seems in sight.

Sullivan's book is the only English-language source I know for biographies of a great many lesser but nonetheless most interesting figures in Chinese art, a phrase Sullivan uses in the ethnic rather than the political sense, so as to incorporate Taiwan, Hongkong, etc. For example, Li Tiefu (1869–1952) was the first important Chinese artist to study abroad, originally in Britain, later in the United States. In America, he was active in Sun Yatsen's revolutionary movement in exile, all the while presenting an unrevolutionary face to the public, complete with business cards reading “Lee Y. Tien A.M., Professor of Portrait, Follower of Mr. William M. Chase and Mr. John Sargent 1905–1925.”

Chinese artists curious about the West were for the most part ignorant of the important effect that Chinese art (and poetry and other disciplines) were having on their opposite numbers in Europe and America. This was at least partly because for a long period the majority of Chinese who wished to study the West had to do so from Japan,

which, after centuries of being the most tightly closed society in Asia, had suddenly become the most open to foreign methods and fashions. Yet of course study in Japan tended to produce distortion. The real question was how to learn Western ideas while staying in China and disseminating them among other artists at home.

In the first few decades of the century, Shanghai and Canton, as the cities most receptive to all types of Western influence, were naturally the places to seek out Western teachers. Many professional art schools sprang up in these Chinese port cities, the most notable being the Shanghai Meizhuan. They came and went, and changed their names, according to ever-shifting levels of tolerance or acceptance. They were sometimes closely tied with pro-Western movements within the broader artistic community, often ones that were also cordial to Western-style literature as well. The New Culture Movement was one of these. It flourished during the warlord period, which lasted through the 1920s and revealed that the warlords were often more conservative in artistic matters than even the Confucian scholars had been.

The new Chinese artists were waging the struggle for realism that their Western counterparts had won not all that much earlier. When younger Chinese artists began to turn their attention to Western styles, genres, and ideas, they did so suddenly and in a way that tended to mix up (or deliberately disregard) Western chronology. In the 1920s, for example, expressionism and déco blossomed side by side, at the same moment that the high-Victorian critics like John Ruskin and William Morris were being translated into Chinese for the first time.

"In the heady atmosphere of the 1920s," Sullivan writes, "artists were free to pick and choose among the plethora of ill-digested ideas and styles they were discovering, with little idea of how they came into being in the West, or why." This is what gives such wonderful vitality to

the work of many of the hundreds of painters, engravers, and sculptors whose work he illustrates here.

Western art, Sullivan writes, "challenged the integrated, holistic Chinese view of reality and the belief that it is the purpose of art to reflect, indeed to promote, that integrated view by producing works in which visual harmony reigns supreme. Western thought and art were more strenuous, more open-ended, more experimental, leaving it to the individual artist to stake out his own ground and reveal reality in his own way. For many young Chinese, this was too great a challenge for the poor means at their command. Many shrank from it into an artificial romanticism, or into feeble imitation of Western styles they barely understood." And that first generation of Chinese modernists—and the generations or two that followed—soon got engulfed in a political environment that held propaganda to be the highest goal of the artist. Only in the past few years has the story picked up where it left off in the 1950s. Some of the most recent work in Sullivan's wonderful book is likewise some of the most vocal. It's never less than completely Chinese, yet never totally outside the international art world.

SOME OTHER BOOKS OF INTEREST TO *Rotunda* readers:

- I've always thought it was quite shrewd of Harold Osborne to include an entry on Samuel Colt, the person who perfected the revolver, in his *Oxford Companion to the Decorative Arts*. Of course, Colt was an arms dealer, death merchant, and just generally a retrograde force in American society. But as he perfected his pistols mechanically he also perfected their appearance. Not until the invention of the upright "daffodil" telephone did such utilitarian objects (which indeed Colt's guns were in 19th-century America) have such beautiful and graceful lines. At least this the true of the so-called army and navy Colts of the 1850s and 1860s, which fell, in design terms, after the stubby, crude-looking proto-revolver of the 1840s and

before the equally stubby and altogether unattractive six-shooter so familiar to us from generations of pop culture. **Colt: The Making of an American Legend** by William Hosley (University of Massachusetts Press, US\$49.95 cloth, US\$29.95 paper) is the book-length companion to a Colt exhibition at the Wadsworth Atheneum in Hartford, Connecticut, which houses the family papers and memorabilia bequeathed by Elizabeth Colt after her husband's death in 1862. Personally, I would have preferred more about Colt the designer and less about Colt the inventor and international business person, but the illustrations of his products, whether the plainest ones or those with heavily engraved cylinders, prove my point.

- Every year the bookselling world is caught completely off guard by some unlikely sounding scholarly work that makes the cross-over into mass popularity, taking everyone by surprise. In 1996 the book was Dava Sobel's *Longitude*. It traced the struggles of John Harrison, an unlettered provincial carpenter in 18th-century England, to solve one of the great problems of the age—how to make a clock that would be accurate enough at sea to permit the easy calculation of longitude (the distance east or west from the invisible line running down the centre of Greenwich Observatory).

Harrison's 40 years of labour changed navigation—and therefore map-making as well. You can see the revolution quite clearly by leafing through Peter Whitfield's book **The Charting of the Oceans: Ten Centuries of Maritime Maps** (Firefly, \$39.95 cloth), which uses serviceable text and some rather vivid plates to show how successive waves of European navigators—Spanish, French, Dutch, French, and English—gradually increased topographical knowledge as they spearheaded the imperialist ambitions of their respective countries. Whitfield's focus is on the Atlantic, the Pacific, and the Indian oceans, more or less in that order.

- Maybe because he was the first of

the Group of Seven to die, J. E. H. MacDonald (1873-1832) has always seemed somehow mysterious. Perhaps the mystery in turn has helped make him one of those figures subject to periodic revivals of interest, such as the one taking place now. His landscapes have always been highly prized, of course, but in the past few years inquiry has focused on his work as a designer (a talent he passed on to his son Thoreau MacDonald, for decades one of Canada's most admired book illustrators). Hunter Bishop began working on this aspect of the elder MacDonald when librarian at the Arts and Letters Club in Toronto; at Bishop's death, the work was taken up by the art historian and curator Robert Stacey. The result is **J. E. H. MacDonald: Designer** (Carleton University Press, \$45.95). Stacey, who seems to have done the lion's share, makes a strong argument for MacDonald's having been the country's first professional graphic designer, as the term is used today. The book is rich with posters, book designs, logotypes, programs—all sorts of jobs—in addition to many archival photographs.

J. E. H. MacDonald: Designer is the second volume in Carleton's new Archives of Canadian Art series; the first was **William Thomas: Architect 1799-1860** by Glenn McArthur and Annie Szamosi (\$59.95 cloth, \$39.95 paper). Thomas was in some ways the father of Canadian architecture, at least as a distinct profession. Immigrating from England in 1843, he was only the fourth architect in practice in Toronto, where he designed such structures as St. Lawrence Hall, St. Michael's Cathedral, and the Don Jail, as well as a variety of residences (including his own, Oakham House, now part of Ryerson Polytechnic University). The book is especially useful for showing how he nourished himself with English architectural traditions, ecclesiastical ones in particular.

DOUGLAS FETHERLING

Douglas Fetherling is the book review editor of Rotunda

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in Karlsruhe, Germany, the riddle of how the world's oldest known flying vertebrate actually flew has been solved. It glided, and did so in a way with no modern parallels.

This find is important beyond the demonstration of a previously unknown form of flight. According to Sues, "In order for scientists to understand better the factors that are driving our current crises in biodiversity, we need to learn more about extinction—what brings the phenomenon about and which species survive. The only way to do this is through the perspective of fossil records—only fossils can really tell us what happens over long periods of time."

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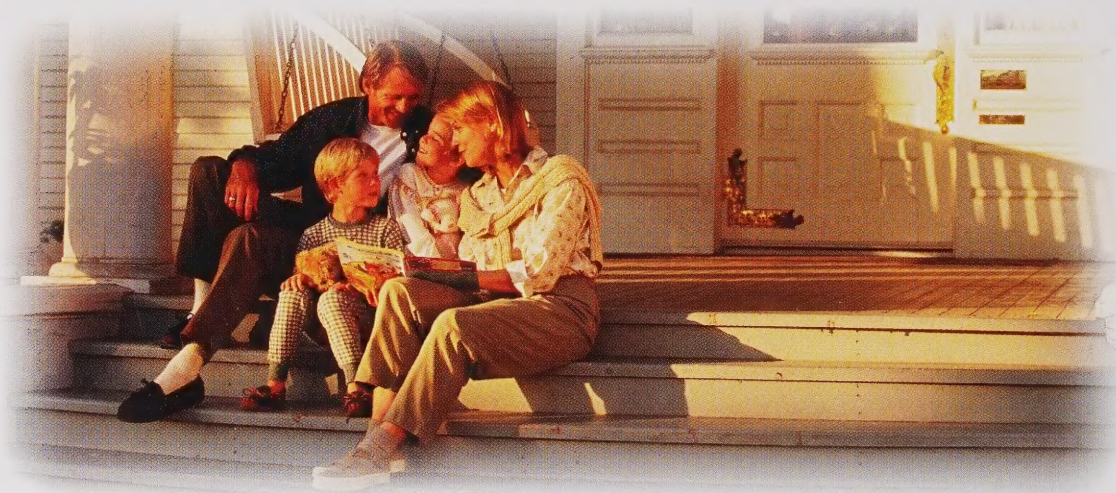


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